

(1) Number of pages 1

(2) Date of repair 18-1-43

(3) Initials of the Referencer \_\_\_\_\_

# MADRAS RECORD OFFICE.

Government of Madras.

*Public works* DEPARTMENT.

|               |                         |
|---------------|-------------------------|
| G.O. No. 2089 | Press<br><del>Mis</del> |
| 34-35         |                         |
| Dated 2 9     | 1862 .                  |

Not to be folded or roughly handled

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*Proceedings of the Madras Government, Public Works Department,  
2nd September 1862.*

---

No. 34. Read the following Proceedings of the Madras Government in the Revenue Department, dated 25th August 1862, No. 1,802 :—

Declining to sanction the estimate for providing additional accommodation for the Press Department of the Collector's Office at Cuddapah without further explanation of its necessity. } (Vide Revenue Proceedings 25th August 1862, Nos. 329-330.)

No. 35. ORDER THEREON, 2nd September 1862, No. 2,089.

Communicated to the Acting Deputy Chief Engineer, Central Circle, for information and guidance.

(Signed) W. I. BIRDWOOD, Colonel, R. E.,  
Secretary to Government.

REVENUE DEPARTMENT.

PROCEEDINGS OF THE MADRAS GOVERNMENT.

Read the following letter from Captain E. HEMERY, R. E., Acting Deputy Chief Engineer, Central Circle, to Colonel W. I. BIRDWOOD, R. E., Secretary to Government, Public Works Department, dated Chepauk, 11th August 1862, No. 53 :—

SIR,

1. I have the honor to solicit sanction for the accompanying estimate, amounting to Rupees 740, prepared at the request of the Collector of Cuddapah for providing additional accommodation for the Printing Press and Establishment at that Station.

2. The three rooms now allotted to the Printing Department are so crowded with tables for type, &c., that much inconvenience is felt in working the Presses.

3. The expenditure can be met from the amount entered in the Budget for the repair of buildings in the Cuddapah District during the current official year.

Referred to the Revenue Department for consideration.

(Signed) W. I. BIRDWOOD, Colonel, R. E.

12th August 1862.

Secretary to Government, P. W. D.

ORDER THEREON, 25th August 1862, No. 1,802.

The Government must decline to sanction this estimate without further explanation of the necessity of additional accommodation for the Press Department of the Collector's office at Cuddapah. That Department is now allowed the use of three large rooms of the dimensions specified in the margin. The first should be ample for the Press room and the other two are sufficient for the four Compositors on the establishment.

| Feet. | Feet. |
|-------|-------|
| 24    | x 12  |
| 18    | x 12  |
| 14    | x 11  |

(True Extract.)

Chief Secretary.

To the Public Works Department.  
" Board of Revenue.

Exd. S. T. Augustin.

Wm. H. R. 1862 & 1863  
No. of Co. 1st Regt. 1st

Feb 26/16

No. of the 1st Co. 1st Regt.  
the 1st Regt. 1st

Feb 26/16  
Received 1/12

Feb 18/12

Order: 1/12  
to the 1st Regt. 1st  
to the 1st Regt. 1st

The estimate for providing  
additional accommodations

for the 1st Regt. 1st  
of the 1st Regt. 1st  
and to add a new without  
further explanation of  
its necessity.

Feb 26/16  
Feb 26/16

2089

Feb 2089.

Commenced to the 1st Regt.  
of the 1st Regt. 1st  
information and guidance.

to the 1st Regt. 1st  
Feb 26/16

13 Regt.

to the 1st Regt. 1st  
and to the 1st Regt. 1st

X 83

Feb 26/16

(1) Number of pages 24(2) Date of repair 15-6-43

(3) Initials of the Referencer \_\_\_\_\_

# MADRAS RECORD OFFICE.

Government of Madras.

Public Works DEPARTMENT.

|                    |               |
|--------------------|---------------|
| G.O. No. 2689      | Press<br>Mis. |
| 115-168            |               |
| Dated 7. 11. 1862. |               |

Not to be folded or roughly handled

*7/6*

*Proceedings of the Madras Government, Public Works Department,  
7th November 1862.*

Read the following letters :—

No. 166. Read the following letter from Lieutenant-Colonel J. OUCHTERLONY, R. E., Deputy Chief Engineer, Southern Circle, to Colonel W. I. BIRDWOOD, R. E., Secretary to Government, Public Works Department, dated Ootacamund, 16th October 1862, No. 110.

SIR,

1 Letter from the Acting Consulting Engineer for Railways, No. 149, dated 4th October 1862, with one enclosure.

\* No. 149, dated 4th October 1862,  
from the Consulting Engineer for  
Railways.

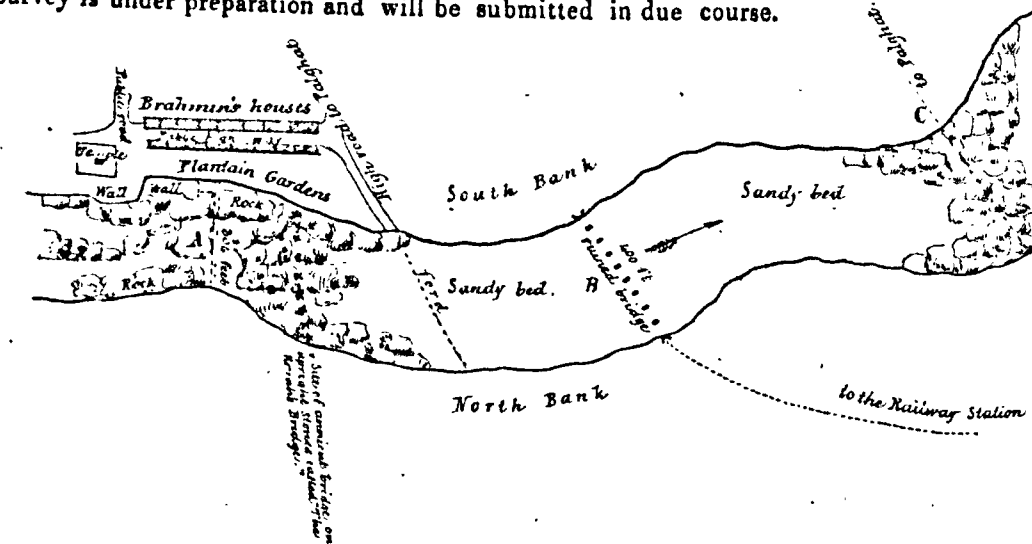
1. I have the honor to report the result of my visit to Kulputty in the Malabar District.

enclosure.

2. I addressed myself in the first place to the enquiry as to whether it would be possible, within reasonable limits of economy, to restore the ruined bridge so as to fit it in any way to carry the traffic by a single line of road-way; the loud and reiterated complaints of the Railway authorities\* having urged me to this as a point for immediate consideration. I am sorry to say however it would only be a vain waste of money to attempt to turn the work to any such account, only three of the piers are standing upright; and all of these are so much dislocated by the shock of the falling arches, that neither superstructure nor substructure can be safely trusted to. I have however instructed the Range Officer, Mr. König, to make a careful examination of the bed of the river on the south side as soon as the water level is low enough to admit of it (it was too high, and the stream too rapid during my visit) in order that it may be ascertained whether solid rock can be found on which to base piers on either side of the one which fell owing to its having only wells to rest on: and if this proves to be the case a platform bridge, either on trussed timber girders, or iron plate girders might be built on the same site in irregular bays.

† A in plan.

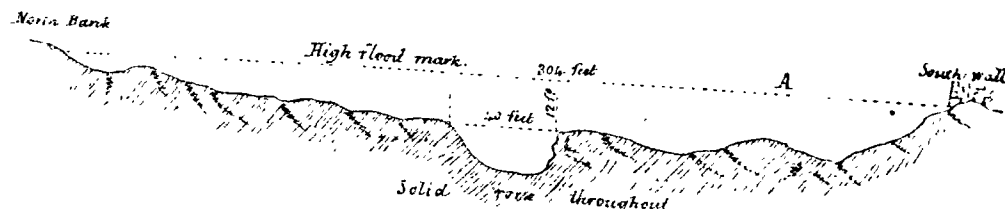
3. By far the best site† for a bridge however exists at a point higher up the stream, nearly opposite a Brabmin temple and a street of Brahmins' houses; and the only reason that I can find assigned for its not having been selected originally is that powerful interest was brought to bear to prevent a public highway being brought within contaminating distance of their (assumed) sacred precincts. Its position will be understood by the subjoined rough sketch; but a proper survey is under preparation and will be submitted in due course.



The description of bridge which I would recommend for construction here is one on rows of wrought iron piles, the butts of which I propose to let into deep sockets cut in the solid rock, which forms the bed of the river from bank to bank at the point indicated, and to secure them by leading. The platform to be carried on solid girders, of plate iron for the larger central span, and of timber for the minor bays.

2 *Proceedings of the Madras Government, Public Works Department,*  
7th November 1862.

4. I annex a rough section of the river to show how remarkably favorable for such a structure the site *A* is. The river is, it will be seen, confined except during freshes to a deep channel in the solid rock which can be spanned by 40 feet girders; and the sockets for all the piles could be cut in dry rock at any period of the year except during the monsoon months, March, June, July and August.



I communicated with the stone cutters of Palghat and ascertained that sockets averaging 15 inches deep and 6½ inches square, can be cut in from four to five days, at a cost not exceeding Rupees 3 each. Teak-wood (of which there is a large quantity now lying available on the south bank of the river) can be obtained in good lengths at about Rupees 15 per "Candy" of 12½ cubic feet; and Erool wood, which would answer almost equally well, at half that price. The site is only 800 yards distant from the Railway Station, and hence the carriage of iron work and of all materials imported, would be easy and economical.

5. I subjoin a rough estimate of the approximate cost of a platform bridge on wrought iron piles; an accurate section is now being taken at the point *A*, and when I receive this, and am favored with the decision of Government upon the subject, I shall be able to compute the probable cost with greater accuracy.

*Wrought iron work.*

|                                                                                           |       |               |
|-------------------------------------------------------------------------------------------|-------|---------------|
| 600 running feet of piles, 6" in diameter, with 6" square feet, at ½ cwt. per foot run... | Tons. |               |
| Braces and struts.....                                                                    | 25    |               |
| Caps to piles and keys...                                                                 | 4     |               |
|                                                                                           | 3     |               |
|                                                                                           | 32    | Rs.           |
| At Rupees 250 per ton...                                                                  |       | = 8,000       |
| Cutting 70 sockets in hard rock at Rupees 3 each...                                       |       | = 210         |
| Leading 70 piles at 10 lbs. per pile...                                                   |       | = 250         |
| Girders, 1½" 88 running feet = 5 tons at Rupees 250...                                    |       | = 1,250       |
| Railings, 650 running feet at Rs. 1 per foot; screws Rupees 100.....                      |       | = 750         |
| Carriage of the above from Madras to Palghat and sundries...                              |       | 540           |
|                                                                                           |       | <u>11,000</u> |

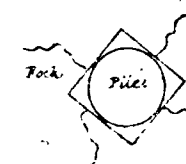
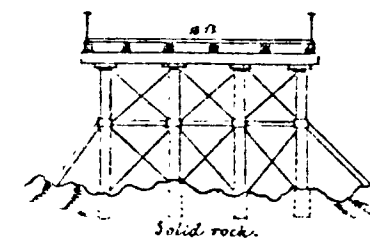
*Proceedings of the Madras Government, Public Works Department,* 3.  
7th November 1862.

*Timber work.*

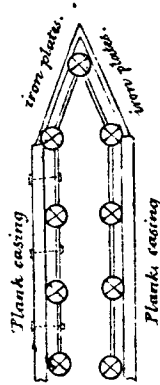
|                                                                                        |         |     |
|----------------------------------------------------------------------------------------|---------|-----|
| PLATFORM.—Girders 800 running feet × 15" × 9"...                                       | = 750   |     |
| Joists 160 × 18 feet × 10" × 6" ...                                                    | = 1,200 |     |
| Planking 304 × 18' × 3" ...                                                            | = 1,368 |     |
| Cap pieces 20 × 18' × 12" × 9" ...                                                     | = 270   |     |
|                                                                                        |         | Rs. |
| Erool wood at Rupees 1½...3,588 C. feet...                                             | 5,382   |     |
| Bolts and nuts, spikes, wastage and contingencies.....                                 | 1,618   |     |
| Total.....                                                                             | 18,000  |     |
| (At Rupees 2½) If Teak-wood is used the total will be...                               | 22,000  |     |
| The amount of the sanctioned estimate for the recently destroyed masonry bridge was... | 23,000  |     |

6. The advantages which a bridge on iron piles seems to possess in contrast with those of a masonry structure in the particular locality alluded to, are celerity and certainty as to time in execution, extreme simplicity of construction, and minimum of diminution of water-way: the latter an important consideration in this instance, because, as at the site I recommend the channel of the river is naturally obstructed and confined by the rocky formation, its further restriction by the presentation of masonry piers, necessarily massive, would not be prudent.

7. Against these advantages however must be set one disadvantage, which consists in the tendency it establishes for floating trees to be caught amongst the piles, and by their efforts to disentangle themselves, to damage the structure; while at the same time the effect of impact of a floating body would be more unfavorable against the head of a pile rooted in the rock than against the face of a solid masonry pier. To counteract this, diagonal bracing and rear struts leaded into the solid rock, would be introduced; while to present the strongest section at the point of threatened fracture, viz., that of insertion into the rock, I propose to have the feet of the piles forged square, and to present them diagonal-wise up-stream. To prevent the entanglement of trees in the iron work I would have casings of cheep Erool wood planks bolted outside the rows of piles for a few feet below high flood mark (it would not be necessary below), the planks being readily removable after the monsoons; and where, as in the case of the centre 40 feet span, it would be advisable to have double rows of piles to carry the iron girders, I would add a pile at the apex and bolt on iron boiler plates meeting in a sharp angle to form a cut-water to fend off heavy logs brought down by the stream.



apex and bolt on iron boiler plates meeting in a sharp angle to form a cut-water to fend off heavy logs brought down by the stream.



8. I have next to remark upon the site proposed for the new bridge (*A* in sketch to paragraph 3), which has but one objection. This is the necessity which its adoption will involve of forming the southern approach through land, and even through a row of houses, occupied by Brahmins of Kulputty, by whom I am informed the most strenuous opposition will be exhibited. Government will probably remit this question for the consideration of the Board of Revenue and of the Collector of the District, and I will therefore merely add that the construction of a bridge at *A* will not necessitate the invasion by a single foot of the (so called) sacred precincts of the Brahmins; the temple and its enclosing wall being entirely avoided.

9. In the event however of Government deciding to reject the site *A*, I have to represent that the spot next to it in eligibility for a viaduct, occurs at a point 7 or 800 yards lower down the river, marked *C* in the sketch, where the solid rock crops out completely across the bed, presenting only one broad channel to be spanned, 60 feet in width. The cost of a bridge however will be greater here than at *A*, both because the section is wider, and because there is a very considerable fall from *A* to *C* which will add greatly to the momentum of floating bodies, and hence necessitate extra strength in the iron work. And if the Brahmins are allowed to carry their point, I think they ought to be made to contribute whatever excess of cost may be established, as also the value of certain lands which will have to be taken up if the bridge is built at *C* to form a road from its southern approach to Palghát; (which I may remark will be a remarkably direct and useful one not above  $1\frac{1}{2}$  miles in length, leading straight into the main street of the Bazar).

10. Should Government disapprove of my proposal to employ iron piles, a girder bridge might be built at *C* on masonry piers; but great solidity must be given to them, as the action of the stream and of floating trees must here be most violent.

Subjoined is a rough section of the river's bed at *C*, but a more correct one is under preparation, and will be submitted hereafter if required.



11. Whatever kind of bridge is decided upon I would suggest that a toll should be established upon it, as it seems to me that such an impost would in this case be perfectly legitimate.

12. The important traffic which should flow into the line of Railway at the Palghát Station, appears to be, and is represented by Mr. Elwin, the Agent and Manager,† to be so seriously impeded by the obstacle of the unbridged Kalputty river, that I think it would be desirable to devote funds to remedy it, if possible, out of the Reserve at once, or as soon as the plan and principle of the new work are decided upon. But if this course is impracticable, provision must be made for the bridge in the Budget for 1863-64, which I would beg permission to do to the extent of Rupees 20,000 for expenditure during that official year.

† Mr. Elwin's letter to Captain O'Connell, No. 679, dated 3rd October 1862.

13. Another pressing necessity for the speedy construction of a viaduct at Kalputty arises from the circumstance that it will be (practically) impossible to bring the road on the south side of the river into really good order until proper metal, which occurs only on the north side all along the line of the Railway, can be carried across it by any other means than by dragging quarter laden carts through the deep sand of its bed. The District Engineer and his Officers are now doing their very best to keep the road in order, but the gravel which is alone available is so very bad, containing, as I found by experiment, fully three-fifths of clay, that it naturally and unavoidably becomes a sea of mud as soon as heavy rains set in. I have in the meantime requested the Range Officer to introduce some improvement by collecting as much shingle as he can from the bed of the river, and by laying this material and brick-bats from the debris of the ruined bridge, as a substratum on which to spread the "jelly," or laterite gravel. A supplemental estimate to cover the extra cost of repairs to be submitted hereafter if found necessary.

No. 167. Endorsement of the Deputy Chief Engineer, Southern Circle, dated Ootacamund, 18th October 1862, No. 117.

From C. KONIG, Esq., 2nd Assistant District Engineer, Malabar, to Lieutenant-Colonel J. OUCHTERLONY, R. E., Deputy Chief Engineer, Southern Circle, dated Palghát, 15th October 1862, No. 11.

SIR,

1. In accordance with your instructions, I have taken soundings on both sides of the fallen (5th) pier of the ruined bridge at Kulputty, and have the honor to inform you that no rock can be found to the depth of ten and more feet.

2. I do not consider the other piers safe, neither their foundation for the construction of a timber or iron bridge with the exception of the first one, they are all more or less injured and shifted from their proper positions.

3. Plan and sections of the new proposed site, &c., are under preparation, and shall be forwarded to you as soon as possible.

4. The site opposite the Brahmins' temple is admirably adapted for a bridge and its selection is to be hoped.

1 Original letter No. 11, dated 15th October 1862.

1. Letter from C. Konig, Esq., 2nd Assistant District Engineer in charge of Palghát Range, Malabar, No. 11, dated 15th October 1862.

2. Submitted to Government with reference to and in continuation of the letter of the Deputy Chief Engineer, Southern Circle, No. 110, dated 16th October 1861.

(Signed) J. OUCHTERLONY, Lieut.-Colonel, R. E.,  
Deputy Chief Engineer, Southern Circle.

No. 168. ORDER THEREON, 7th November 1862, No. 2,689.

1. Judging from the information furnished in the foregoing letters, the Government are of opinion that the site marked *A* in the sketch given at paragraph 3 of the first letter, is to be preferred, and they will, therefore, await the receipt of the necessary plan, estimate, &c., for a bridge at that place. In submitting those documents, the Government should be informed of the amount of compensation which will have to be paid for the land and the range of houses which it will be necessary to purchase\* for the formation

\* Paragraph 8 of Deputy Chief Engineer's letter. of the southern approach of the proposed bridge.

2. The project in question should be submitted through the Collector, who will be good enough to report whether the grounds of opposition on the part of the Brahmins are just and reasonable, and such as preponderate over those considerations which render the site *A* desirable.

6 Proceedings of the Madras Government, Public Works Department,  
7th November 1862.

3. The question of toll referred to in paragraph 11 of Colonel Ouchterlony's letter dated 16th October 1862, will be considered when the bridge is completed.

(Signed) W. I. BIRDWOOD, Colonel, R. E.,  
Secretary to Government.

Public

x No 149  
of 4<sup>th</sup> Dec 1862  
from the Consulting  
Engineer for Railways.

Enclosure 2  
1. This is to be  
for Consulting Engineer  
for Railways, to be  
149 dated 14<sup>th</sup>  
Dec 1862, with  
1 Enc 2.

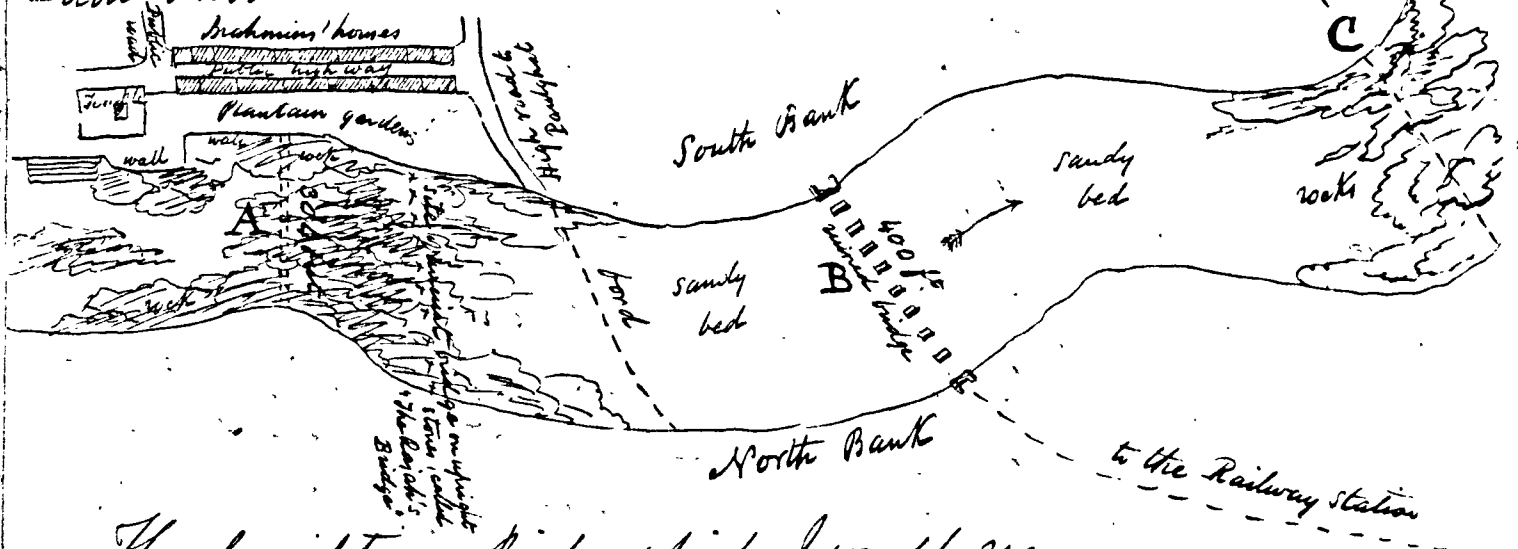
Southern Circle Office No 110  
Madras Botacamund, 1862  
16<sup>th</sup> Oct 1862  
From  
Lieut Colonel J. Ouchterlony R.E.  
Deputy Chief Engineer Madras  
To  
Colonel W. I. Birdwood R.E.  
Secretary to Government (P.W.D.)

Sir,  
I have the honor to report the result of my  
visit to Kulpully in the Madabar District.  
2. I addressed myself in the first place to the  
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traffic by a single line of roadway; the loud  
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Only 3 of the Piers are standing upright; all  
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side of the one which fell <sup>owing to</sup> its having <sup>only</sup> wells  
to rest on.

If this proves to be the case a platform bridge, either on trussed timber girders, or iron plate girders might be built on the same site in irregular bays.

3. By far the best site\* for a bridge however exists at a point higher up the stream nearly opposite a Brahmin temple & street of Brahmins' houses; the only reason that I can find assigned for its not having been selected originally is that powerful interest was brought to bear to prevent a Public highway being brought within contaminating distance of their (assumed) sacred precincts.

Its position will be understood by the subjoined rough sketch; but a proper survey is under preparation, & will be submitted in due course.

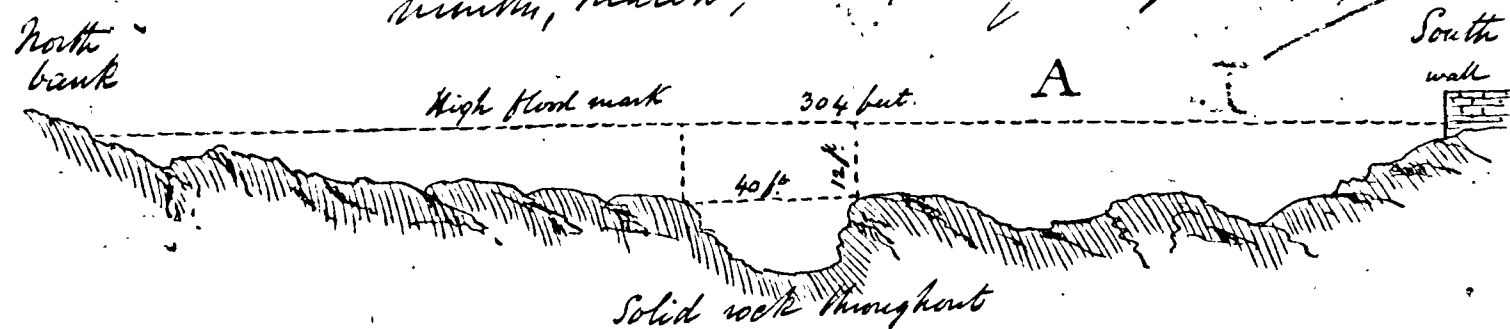


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The platform to be carried on solid girders, of plate iron for the larger central span, & of timber for the minor bays.

4. I annex a rough section of the river

to shew how remarkably favorable for such a structure the site A is. The river is, it will be seen, confined - except during freshets - to a deep channel in the solid rock which can be spanned by 40 feet girders; the sockets for all the piles could be cut in dry rock at any period of the year except during the monsoon months, March, June, July, August.



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Teak wood (of which there is a large quantity now lying available on the S. bank of the river) can be obtained in good lengths at about Rs 15 per 'Candy' of 12 to cubic feet; & Eucalypt wood, which would answer almost equally well, at half that price.

The site is only 800 yards distant from the Railway Station, & hence the carriage of iron work & all materials imported, would be very economical.

5. I subjoin a rough estimate of the approximate cost of a Platform bridge on wrought iron piles; an accurate section is now being taken at the point A & when I receive this, I am provided with the decision of Govt. upon the subject, I shall be able to compute the probable cost with greater accuracy.

Brought iron work

600 running feet of piles, 6 inches in diameter, with  
6" square feet, at  $5\frac{1}{6}$  Cwt.  $\frac{1}{2}$  foot run = 25 tons

Braces & Struts ----- 4 "

Caps to piles, & Keys ----- 3 "

at Rs 250 per ton: 32 tons = Rs 8000.

Cutting 70 sockets in hard rock @ Rs 3/each = " 210.

Leading 70 piles @ 10 lbs per pile ----- = " 250.

Girders: I<sub>8</sub> 88 running feet = 5 tons @ Rs 250 = " 1250.

Railings: 650 run. feet @ Rs 1 lb ft; screws Rs 100 = " 750.

Carriage - of the above from Madras to Palghat & return = " 540.

Timber work ----- Rs 11,000.

Platform: Girders 800 run. ft.  $\times 15' \times 9' = 750$

Joists:  $160 \times 10' \times 10' \times 6' = 1200$

Planking,  $304 \times 18' \times 3' = 1368$

Cap pieces,  $20 \times 10' \times 12' \times 9' = 270$

Iron work @ Rs  $1\frac{1}{2}$ : 3588 Cwt. = 5,382.

Bolts, nuts, spikes, wrought & casting pieces ----- " 1,618.

Total Rs 18,000.

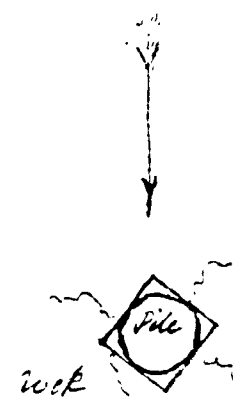
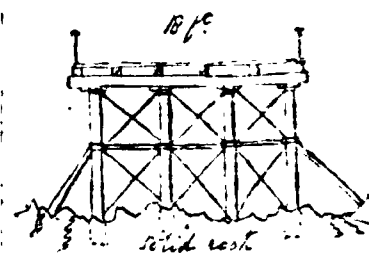
(@ Rs  $2\frac{1}{2}$ ) If Teak work is used, the total will be ----- Rs 22,000.

The amount of the sanctioned estimate for the recently destroyed masonry bridge was ----- Rs 23,000.

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the rock, than against <sup>the face of</sup> a solid masonry pier. To



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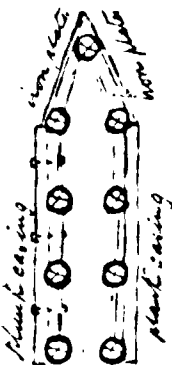
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the iron girders, I would add a pile at the apex  
of bolt on iron boiler plates meeting in a sharp  
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brought down by the stream.

8. I have next to remark upon the site proposed for the new bridge, (A in sketch to para 3) which has but one objection. This is the necessity which its adoption will involve of forming the Southern approach, thus' land, seven or eight a row of houses, occupied by Brahmmins of Kulputty, by whom I am informed the most strenuous opposition will be exhibited. Govt. will probably remit this question for the consideration of the Board of Revenue. By the Collector of the District, I will therefore merely add that the construction of a bridge at A will not necessitate the invasion by a single foot of the (so called) sacred precincts of the Brahmmins; the Temple its enclosing wall being entirely avoided.

9. In the event however of Govt. deciding to reject the site A, I have to represent that the spot next to it in eligibility for a viaduct, occurs at a point 7 or 800 yards lower down the river, marked C in the sketch, where the solid rock crops out completely across the bed, presenting only one broad channel to be spanned, 60 feet in width.

The cost of a bridge however will be greater here than at A, both because the section is wider, because there is a very considerable fall from A to C which will add greatly to the momentum of floating bodies, thence necessitate extra strength in the iron work. And if the Brahmmins are allowed to carry their point, I think they ought to be made to contribute whatever



excess of cost may be established, as also the value of certain lands which will have to be taken up if the bridge is built at C to form a road from its Southern approach to Palghat; (which I may remark will be a remarkably direct & useful one not above 1 1/2 miles in length, leading straight into the main street of the Bazar).

10. Should Govt. disapprove of my proposal to employ iron piles, a girder bridge might be built at C on masonry piers; but great solidity must be given to them, as the action of the streams & of floating trees must here be most violent. Subjoined is a rough section of the river's bed at C but a more correct one is under preparation, and will be submitted hereafter if required.

11. Whatever kind of bridge is decided upon I will suggest that a toll should be established upon it, as it seems to me that such was import would in this case be perfectly legitimate.

12. The important traffic which should flow into the line of Railway at the Palghat Station, appears to be, as represented by Mr. Elwin the agent-manager to be so seriously impeded by the obstacle of the unbridged Kulputty river, that I think it would be desirable to devote funds, if possible, to remedy it.

x Mr. Elwin's letter  
to Capt. C. C. Cammell  
24. 6. 79  
d/ 3<sup>rd</sup> Oct 1882

19  
not of the Reserve at once, or as soon as the plan  
Principle of the new work are decided upon.

But if this course is impracticable, provision  
must be made for the bridge in the Budget for  
63/64, which I would beg permission to do to the  
extent of — Rs 20,000 for expenditure during that  
official year.

13. Another pressing necessity for the speedy construction  
of a viaduct at Kulpully arises from the circum-  
-stance that it will be (practically) impossible to  
bring the road on the S. side of the river into really  
good order until proper material, which occurs only  
on the N. side all along the line of the Railway,  
can be carried across it by any other means than  
by chugging.  $\frac{1}{4}$  laden carts thru' the deep sand of  
its bed. The District Engineer this officer is  
now doing their very best to keep the road in order,  
but the gravel which is alone available is so  
very bad, containing, as I found by experiment,  
fully  $\frac{3}{5}$ ths of clay, that it naturally some-  
-what becomes a sea of mud as soon as  
heavy rains set in.

I have in the mean-  
time requested the Range Officer to introduce some  
improvement by collecting as much shingle as  
he can from the bed of the river, by laying this  
material, thick mats from the debris of the ruined  
bridge, as a substratum on which to spread  
the "jelly", or laterite gravel. A supplemental  
estimate to cover the extra cost of repairs to be sub-  
-mitted hereafter I found necessary.

Submitted  
By Chief Eng<sup>r</sup> J. C. Cole





2089

Proceedings of the Madras Government

Under date the 5th November 1862

Read the following letters from the Deputy Chief Engrs. S. G. Girdle-

Reports the result of his visit to the Pulputti Bridge in the district of Malabar, recommends the construction of a Platform bridge on a straight line parallel to the river in lieu of the ruined masonry structure, fixes the site and recommends that Rs. 20,000 be entered in the Budget for 1863/64 for the work in question

M. E. 16th October 1862 No. 1101

Submits for information a letter from Mr. King, 2nd Assistant District Engrs. Malabar reporting that no trace of rock could be found on either side of the fallen pier of the ruined Pulputti Bridge

M. E. 18th October 1862 No. 1171

Judging from the information furnished in the foregoing letters, the Govt. are of opinion that the site marked A in the sketch given at Para 3 of the first letter, is the proper place for the bridge, & they will, therefore, await the receipt of the necessary plans, estimate &c. for a bridge at that place. In submitting those documents, the Govt. should be informed of the amount of compensation which

app

To Govt of 18th October 1862

1862

Col. Connelley

1862

Enclosure

It is found that no trace of rock could be found on either side of the fallen pier of the ruined masonry structure, & they will, therefore, await the receipt of the necessary plans, estimate &c. for a bridge at that place. In submitting those documents, the Govt. should be informed of the amount of compensation which

12-29

will have to be paid for  
the land & the range of  
houses which it will be  
necessary to purchase for  
the formation of the southern  
approach of the proposed bridge.

\* Para 8 of Dy Ching's letter

The project in question  
should be submitted through  
the Collector, who will be  
good enough to report whether  
the grounds of opposition on  
the part of the Brahmins  
are just & reasonable, &  
such as preponderate over  
those considerations which render  
the site A desirable.

The question of  
toll referred to in Para 11  
of Col Auchterlony's letter  
of 16 Oct 82, will be consi-  
dered when the Bridge is  
completed.

W.B.

115  
- 5 = 110

13 Cpis.

- To The Dy Ching L. C. with 2 Encls. Slip 13<sup>th</sup>
- 14. " " " " " " " " " " " "
- 1. " " " " " " " " " " " "

Collector of Malabar  
Constructing Bridge for Railway

12-29-82

Copy in envelope to  
of 18 Dec 1813

1813. 1813. 1813. 1813.  
of 18 Dec 1813

1813. 1813.

1813. 1813.  
of 18 Dec 1813

1813.

During the night of the  
necessary to be and estimate  
for for a bridge at the site 1813.  
provided by the Army Engineer  
to be in line of that where the  
late & early bridge at the same  
was continued with a new  
information therein required  
and directing that the Royal  
the bridge be demolished through  
the bridge together with the  
to be on a new point. 1813.  
the question of to be in the  
the construction of the bridge.

1813. 1813.

1813. 1813.  
1813. 1813.