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# MADRAS RECORD OFFICE

## Government of Madras

*Public Works*

DEPARTMENT

|                        |                       |
|------------------------|-----------------------|
| G.O. No. <i>488-89</i> | Press <i>Original</i> |
| <del>B.P. No.</del>    | Mis.                  |
| Dated <i>19. 2.</i>    | 1957<br><i>1875</i>   |

Not to be folded or roughly handled

*Proceedings of the Madras Government, Public Works Department,  
19th February 1875.*

Read the following papers :—

No. 497. Proceedings of the Madras Government, in the Marine Department,  
dated 22nd October 1874, No. 388.

From Mr. F. H. CHEESEWRIGHT, to the Hon. D. F. CARMICHAEL, Acting  
Chief Secretary to Government, Fort St. George, dated Cocanada,  
9th October 1874.

From instructions received by me from Mr. G. Wells from England to proceed  
to Cocanada on my completing the erection of the North Sands Light-house I  
fulfilled those instructions, arriving at Cocanada on the 24th July, reporting my  
arrival on landing to the Master Attendant who, to my surprise, informed me no  
instructions had been received by him relative to the purport of my visit, but  
promised to report my arrival to the proper authorities, which I fully believe he  
did on the 27th July.

2. I was unable to make any preparations towards getting ready for sea in  
consequence of the local authorities having received no instructions; but on the  
26th August Captain Castor furnished me with a copy of the Government Proceed-  
ings, dated 7th August 1874, No. 2,170, and Major J. Beatty had an interview with  
me on the 8th September. From that date no time has been lost in preparing  
materials, boats, etc.

3. I, accompanied by Captain Castor, visited the Government Workshops at  
Dowlaisweram, at the request of Major Beatty, to obtain any gear that we might  
deem suitable for the expeditious completion of the work. Hearing from Captain  
Castor that the weather was liable to get worse every day, and only extremely fine  
weather being suitable for the intended operations with the gear at our disposal,  
excepting one or two trifling articles there was literally nothing in the workshops  
suitable.

4. The arrangements were complete a day or two previous to the arrival of  
the piles and screws from England. We deemed it necessary, before the boats  
with material and men were sent out, to proceed to the coast, select the site, take  
bearings, and sound all over the locality, and likewise to ascertain the nature of the  
bottom and also to buoy off the exact spot. In this attempt we most signally failed  
for a calm set in when some distance from shore, and, after anchoring for eight or  
nine hours, dragging all the time seaward owing to the heavy freshes running out  
of the Godavery, and seeing that a south-west squall was coming on and night fast  
approaching, we were forced to return to Cocanada.

5. Having noticed the high sea that was prevailing on the coast we made  
additional arrangements in our plan, in our estimation sufficient to meet all  
requirements in consequence of the heavy sea that was running.

6. On the 28th September all boats, men, and materials were sent out to the  
site with a sufficiency of water and provisions. At midnight on this day Captain  
Castor and self started for the scene of operations. On the 29th, after anchoring  
the boats in their proper positions and taking soundings, I at once commenced  
operations, the weather being squally from south-west with a very heavy sea  
running, which demanded great caution and judgment to prevent accidents. On the  
30th September I managed, the weather being somewhat milder, after joining  
the two lengths of pile, making 40 feet in all, to lower same on to the ground.  
From this moment our troubles commenced, for no sooner had the pile touched

*Proceedings of the Madras Government, Public Works Department,  
19th February 1875.*

the ground than I discovered there was really too much swell; I therefore attempted to raise the pile, but unfortunately the tackle would not work; I then cut the pile adrift after securely buoying it. For the next five days my attention was drawn to the necessity of raising this pile, but all action has been ruthlessly frustrated by the violent action of the sea. Captain Castor also kindly submitted a suggestion which I thought admirable; it was tried, but, owing to the action of the sea being so great, it proved futile. The sea neutralized every effort, however skilfully planned, and to have kept at the spot would have only resulted in serious, if not fatal, consequences. I deemed it on that account advisable to return. But, however, before leaving I managed, under great difficulty and danger, to put it down about 9 feet in the ground, but being unable to work on it any longer, and the weather very threatening with an increase of sea, buoyed and left the pile standing.

7. Through the information kindly forwarded by Captain Castor, who certainly appears to be well acquainted with the locality, and from my own observations and experiments, I am perfectly satisfied as to the nature of the ground and the size of screws required for the foundation of the proposed light-house. Notwithstanding this I deemed it proper, so that there could be no possibility of an error, to take a boring on the sand bank in the locality inside the surf, and the stratum was found the same.

8. I also bored the bed of the main outlet of the Godavery with the similar results.

9. In carrying out these operations I beg to observe that we were very much troubled by the want of proper means of communication and moving rapidly at any time from place to place, occupying frequently a whole day and night to go to and fro to the site of the proposed light-house; had we only possessed a steam-tug, the work would have been most considerably facilitated and much valuable time saved. This I would most urgently recommend to the favorable consideration of the Government.

10. I feel that I would not be doing justice to Captain Castor, the Master Attendant of this port, were I to close this report without bringing to notice the great assistance I have in every way received from him. Before the piles and screws arrived from England all arrangements were complete; the materials were purchased and prepared; the boats, lascars, and carpenters were engaged of the best and most efficient description. The greater portion of his own establishment were placed at my disposal, thereby saving Government the hire of fresh men to some great extent; I had free access to everything in his stores suitable for the work, and his personal supervision was valuable to no small extent in facilitating my labors, and I beg through you to convey my best thanks to this officer for his courtesy and energetic assistance, which I had so largely experienced in executing the work which had been assigned to me, and beg you to bring this to the notice of Government.

11. I was under the impression that this work was to be carried out with the assistance of the Officers of the Department of Public Works, but from some unknown cause I regret to say I have not received any active assistance from the officers of that department. This may possibly arise from none of them residing near the spot.

*Proceedings of the Madras Government, Public Works Department,  
19th February 1875.*

12. I purpose leaving India immediately, and will lay a detailed report of my operations before Mr. G. Wells for the information of the Secretary of State on my arrival in England.

13. I beg to convey my thanks for all the assistance I have received from the Government of Madras.

ORDERED that copies of the foregoing letter be furnished to the Department of Public Works and to the Master Attendant, Madras.

2. Inquiry will be made in the Department of Public Works why no action was taken by the District Engineer on the orders issued in that department, dated 7th August 1874, No. 2,170, until the 8th September, and why no assistance was given to Mr. Cheesewright.

3. The Order, it is observed, was referred on the 12th August to the Master Attendant for report whether the amount required to meet the preliminary expenses could be made available from Port Funds, and his reply, dated the 15th idem, was disposed of in Order dated the 24th, No. 231, assigning the requisite funds from the General Port Fund.

4. The Master Attendant will inform Captain Castor that the Governor in Council appreciates the assistance given by him to Mr. Cheesewright in conducting his operations.

(True Extract.)

(Signed)

L. A. CAMPBELL,  
Ag. Under Secretary,  
for Acting Chief Secretary.

No. 498. *Proceedings of the Madras Government, in the Marine Department,  
dated 31st October 1874, No. 397.*

From Captain J. H. TAYLOR, R.N.R., Acting Master Attendant, Madras, to the Hon. D. F. CARMICHAEL, Acting Chief Secretary to Government, Fort St. George, dated Madras, 22nd October 1874, No. 6,535.

Administrative Department.

I HAVE the honor to acknowledge receipt of G. O., in the Marine Department, dated 12th instant, No. 372, furnishing copy of an order in the Public Works Department on an application from this office for the services of a steamer, dated 3rd instant, to aid in the recent experiments off Hope Island Light-house, and to report as follows.

2. Mr. Cheesewright, in a letter dated 9th instant, states, "The boring operations under my direction for the proposed screw-pile light-house are completed, and I beg leave to tender my thanks for the assistance I have received from your department, especially from the Master Attendant here, who kindly lent his valuable assistance and placed everything in his charge at my disposal."

3. Captain Castor reports that on the 6th instant a screw-pile was put down in 3½ fathoms of water, but, owing to the heavy sea running at the time carrying away the derrick and driving the boats away from their moorings, they were compelled to put back into Cocanada, leaving the pile in its place. On the 7th operations were renewed inshore of the line of surf, and completed on the 8th instant. Of the nature of the ground, the Master Attendant observes, "The ground on shore fronting the screw-pile, which was buoyed and left in 3½ fathoms of water, is

composed of two strata superposing each other, the lower stratum being stiff mud, and the upper sand slightly intermixed with mud. In the bed of the main channel of the Godavery the ground is composed chiefly of mud, soft in some places, and stiff in others." "On this point I may add that Mr. Cheesewright appears to be perfectly satisfied with the results obtained by him, and has proceeded to England in the S.S. *Orchis* from Madras."

4. I submit an account expenditure incurred by Captain Castor, which, it will be noted, includes customs duty paid on the screw-piles at Cocanada, together with a statement of the cost of stores supplied for the purpose, showing the aggregate cost of these experiments to have been Rupees 4,715-10-1.

5. As this sum will eventually have to be met from Imperial Funds in the Public Works Department, I am about to instruct the Master Attendant, Cocanada, to make over the balance of stores in hand to the District Engineer, Godavery.

It is observed that Mr. Cheesewright's report on the mooring operations was disposed of in G. O., dated the 22nd October 1874, No. 388.

2. The memorandum of expenses incurred will be transferred to the Public Works Department, and the arrangement to hand over the balance of stores to that department is approved.

(True Extract.)

(Signed)

L. A. CAMPBELL,  
Ag. Under Secretary,  
for Acting Chief Secretary.

No. 499. From Major J. BEATTY, R.E., District Engineer, Godavery, to Colonel G. W. WALKER, R.E., Secretary to Government, Public Works Department, dated Dowlaishweram, 30th October 1874, No. 2,437.

I HAVE the honor to report on the subject of G. O., No. 2,894-B, of 9th instant, which has special reference to the provision of means of communication by steamer with the site of the iron light-house, which is to be erected off Cocanada.

2. As nearly as I can judge, the site of the light-house will be about 11 miles on a bearing of E. by S. to E. by S.  $\frac{1}{4}$  S. from the Cocanada Light-house, and about 8 miles on a bearing of N. E. by N. to N. E. by N.  $\frac{1}{4}$  N. from the Hope Island Light-house. All supplies of labor, materials, etc., when the work is under construction, must be taken out to the place from Cocanada by water, a distance of about 11 miles.

3. I understand that Mr. Cheesewright, the Contractor's Agent, who was lately at Cocanada, has left for England after satisfying himself of the nature of the ground near the proposed site, and that he is to return in January with the materials for the building and put it up at once. The sea off Cocanada is in its most tranquil state in the months of January, February, and the early part of March; after that, as the hot weather advances, there would be much strong wind and rough sea, and boring operations would be impossible.

4. Mr. Cheesewright's report on the borings he made when here has probably been ere this communicated to Government through the Master Attendant, Administrative Department. As I was unable to spare an officer to stop at

Cocanada and watch over the work, and the Master Attendant, Captain Castor, was on the spot, and both able and willing to render every assistance requisite, I left the work in his hands. If Mr. Cheesewright was unable to do all that should have been done, it was owing to the mistake the contractor made in sending him to Cocanada at such a season of the year. As I understand paragraph 8 of Colonel Fraser's memorandum, printed with G. O., No. 569, of 5th March 1874, the nature of the ground at the site should have been ascertained to a depth of at least 20 feet; and it would seem, from Captain Castor's reports, that, owing to the severe weather, this could not be done. The total cost of the boring operations, Captain Castor informs me, was Rupees 1,672-9-5, the greater part of the expenditure being for materials that will be required again at the construction of the light-house.

5. As the time when the state of the weather will be suitable is short, and the distance by water, which is the only route, is about 11 miles, it is evident that a steamer will be very much required when the work is in progress.

6. In my letter, No. 1,067, of 4th July 1874, I gave some information regarding the steamers on the Godavery, which I would now supplement by explaining their unfitness for use in the harbour, and the impossibility of sending them there in time for the light-house work.

7. The Godavery steamers are all now above the Dowlaishweram Anicut, and (with the exception of the two smaller ones, the *Little Nell* and *Fawn*, neither of which would live in the slightest breeze at sea) cannot be taken down the canals, and therefore, if it were decided to take one of them to Cocanada, they must be floated over the anicut in some 8 or 9 feet fresh about July or August next (as there will be none before), and this would be too late for the light-house work. Besides, being all flat bottomed and keel-less, they are unfit to encounter rough weather at sea, and it would be a very great risk both for the vessel and the lives of those on board to attempt taking one of them out of the river and round by sea to Cocanada.

8. As to the fitness of the Upper Godavery Steamers *Godavery*, *Wurdah*, and *Wynegunga*, which may have been specially referred to in the Government Order, I beg to state that, owing to their extremely light build and novel construction, they are quite unfit to enter Cocanada Bay.

9. These vessels are 140 feet long, 25 feet broad,  $3\frac{1}{2}$  feet deep, and perfectly flat bottomed; they resemble nothing I know of so much as a photographer's toning bath shallow, rectangular, flat bottomed, keel-less, driven by a stern-paddle wheel, and open at top; they are only suited for river navigation.

10. There hulls consist of 8-inch steel plates, and the rivets are counter-sunk. There are no transverse ribs, but the steel plates are rivetted to longitudinal  $1\frac{1}{2}$ -inch angle iron, placed 18 inches apart. There are no beams or other strengthening supports, and the vessels are perfectly open boats. Even when working on the river every precaution is necessary when encountering a head wind by reducing steam, etc., to avoid severe strains on the rivets.

11. I consider them totally unfit for sea-going purposes, for which, indeed, they were never intended, because, owing to their weak construction, they could not stand an ordinary sea, and being open boats they must be swamped.

*Proceedings of the Madras Government, Public Works Department,  
19th February 1875.*

12. The only vessel we have at all adapted to harbour work is the *Fred and May*, and even she rolls greatly, being flat bottomed and keel-less. But the *Fred and May* was dismantled several months since, and brought up to Dowlaishweram to have a new boiler fitted in her. The boiler was to have been finished and shipped to Cocanada in May 1874—vide G. O., No. 1,713, of 25th June 1874, but nothing further has been heard about it.

13. I can only suggest that, as the *Fred and May* is not now likely to be ready for use in January, the *Frank and Ada*, her sister boat, should be recalled from Calcutta for this special duty. The *Frank and Ada* was sent to Calcutta for service in connection with the famine works, and, as the famine is at an end, it is probable she can now be spared for other duty. She could be brought down the coast with perfect safety in the beginning of January.

14. But I may mention, Mr. Cheesewright informed me that in the case of another light-house he was employed on, Mr. Wells provided a steamer at his own cost, and at the conclusion of the work sold it, at their own request, to the Government for whom the light-house had been constructed. If necessary, he would doubtless have no objection to do the same in this case.

No. 500:

ORDER THEREON, 19th February 1875, No. 483.

**CIVIL WORKS, No. 30.**

ORDER No. 2,581-B in the Public Works Department will be communicated to the Marine Department. From the District Engineer's letter to the Chief Engineer recorded therein, it appears that the order of the 7th August, No. 2,170, reached Major Beatty on the 15th; and that, on receipt of it, he went to Cocanada and had a consultation with the Master Attendant and Mr. Cheesewright; also that nothing had been, or could be, done up to the date of that letter (27th August) on account of the non-arrival of the experimental screw-pile, which it was Mr. Cheesewright's errand to put up, and of the state of the weather. Mr. Cheesewright's arrival at Cocanada on the 24th July having been long antecedent to the date of receipt of the first order, and no report of his arrival having been made either by himself or Captain Castor to Major Beatty, the action of the latter officer does not appear to have been dilatory.

2. It would appear to have been mutually arranged by all parties that Captain Castor's personal co-operation would be sufficient for the purpose, which seems to have been the sole reason why more was not done by the District Engineer. That officer's letter, No. 2,437, of 30th October, now recorded, explains how it was that no steamer was available to assist.

3. The conclusion that is arrived at in the Public Works Department is that the experimental boring has been a failure, and that its results are not likely to be acceptable to Colonel Fraser who recommended it to be undertaken, or to the Government of India on whose account it has been made, and to whom as well as to the Secretary of State for India this opinion must be communicated. Such failure is, however, attributable to the inauspicious season at which the

*Proceedings of the Madras Government, Public Works Department,  
19th February 1875.*

experiment was conducted in consequence of Mr. Wells' representative having been available to superintend it at that time.

(True Extract.)

Colonel, R.E.,

Secretary to Government.

To the District Engineer, Godavery.  
" Marine Department.

Exd. A. Grubert.  
Spare Copies

PUBLIC WORKS DEPARTMENT,  
FORT ST. GEORGE, February 19th, 1875.

No. 501.

No. 489.

FROM

COLONEL G. W. WALKER, R.E.,  
Secretary to the Government of Madras,  
Public Works Department,

TO

THE SECRETARY TO THE GOVERNMENT OF INDIA,  
Public Works Department.

CIVIL WORKS, No. 31.

SIR,—With reference to paragraph 3 of my letter, No. 1 B, dated 5th March 1874, I am now directed by His Excellency the Governor in Council to forward the accompanying papers in which are detailed the proceedings taken with reference to the preliminary borings for the Screw Pile Light-house at Cocanada, in order that the Government of India may have the means of forming an opinion as to their result.

I have the honor to be,

Sir,

Your most obedient servant,

(Signed) G. W. WALKER, Colonel, R.E.,  
Secretary to Government.

Ed. T. O'Connor.

Spare Copies

*Proceedings of the Madras Government, Marine Department,  
31st October 1874.*

No. 47. Read the following letter from Captain J. H. TAYLOR, R.N.R., Acting Master Attendant, Madras, to the Hon. D. F. CARMICHAEL, Acting Chief Secretary to Government, Fort St. George, dated Madras, 22nd October 1874, No. 6535 :—

Administrative Department.

I have the honor to acknowledge receipt of G.O. in the Marine Department, dated 12th instant, No. 372, furnishing copy of an order in the Public Works Department on an application from this office for the services of a steamer, dated 3rd instant, to aid in the recent experiments off Hope Island Light-house, and to report as follows.

2. Mr. Cheesewright, in a letter dated 9th instant, states, "The boring operations under my direction for the proposed screw-pile Light-house are completed, and I beg leave to tender my thanks for the assistance I have received from your department, especially from the Master Attendant here, who kindly lent his valuable assistance and placed everything in his charge at my disposal."

3. Captain Castor reports that on the 6th instant a screw-pile was put down in 3½ fathoms of water, but, owing to the heavy sea running at the time carrying away the derrick and driving the boats away from their moorings, they were compelled to put back into Cocanada, leaving the pile in its place. On the 7th, operations were renewed inshore of the line of surf, and completed on the 8th instant. Of the nature of the ground, the Master Attendant observes, "The ground on shore fronting the screw-pile, which was buoyed and left in 3½ fathoms of water, is composed of two strata superposing each other, the lower stratum being stiff mud, and the upper sand slightly intermixed with mud. In the bed of the main channel of the Godavery, the ground is composed chiefly of mud, soft in some places, and stiff in others." "On this point, I may add that Mr. Cheesewright appears to be perfectly satisfied with the results obtained by him, and has proceeded to England in the S.S. *Orchis* from Madras."

4. I submit an account expenditure incurred by Captain Castor, which it will be noted includes customs duty paid on the screw-piles at Cocanada, together with a statement of the cost of stores supplied for the purpose, showing the aggregate cost of these experiments to have been Rupees 4,715-10-1.

5. As this sum will eventually have to be met from Imperial Funds in the Public Works Department, I am about to instruct the Master Attendant, Cocanada, to make over the balance of stores in hand to the District Engineer, Godavery.

No. 48. ORDER THEREON, 31st October 1874, No. 397.

It is observed that Mr. Cheesewright's report on the mooring operations was disposed of in G.O., dated the 22nd October 1874, No. 388.

2. The memorandum of expenses incurred will be transferred to the Public Works Department, and the arrangement to hand over the balance of stores to that department is approved.

(True Extract.)

*For Acting Chief Secretary.*

To the Master Attendant, Madras.  
" Public Works Department, with the memorandum.  
" Accountant-General.

Exd. J. H. Burns.

Memo. of expenses incurred on account of being  
operations off Hope Island, Escomada.

|                                                                                         | Rs   | A  | P  |                        |
|-----------------------------------------------------------------------------------------|------|----|----|------------------------|
| As per Statement from the Master<br>Attendant, Escomada, dated 13 <sup>th</sup> October | 1874 | 9  | 5  |                        |
| 8 Coils Coir rope                                                                       | 52   | 9  | 6  |                        |
| 1 Deep sea lead 12 lbs                                                                  | 3    | 6  |    |                        |
| 1 Do 7 lbs                                                                              | 1    | 15 | 6  |                        |
| 1/2 Canby Coir                                                                          | 13   | 4  | 6  |                        |
| 1 Deep sea line                                                                         | 2    | 12 |    |                        |
| 4 Anchors                                                                               | 4    | 60 | 11 | 5                      |
| 5 bolts Canvas                                                                          | 13   | 6  | 14 |                        |
| 5 lbs sewing twine                                                                      | 5    |    |    |                        |
| 1 iron scratch block 4 1/2 inch                                                         | 20   | 5  |    | Supplied by the        |
| 1 Coir rope Manila 6 inch                                                               | 2    | 46 | 12 | General Superintendent |
| 60 guttans chain 5/8 inch                                                               | 180  |    |    | Public Works Store     |
| 60 Do 3/4 inch                                                                          | 202  | 8  |    |                        |
| 4 blocks 12 inch single                                                                 | 14   | 5  | 4  |                        |
| 4 Do double                                                                             | 29   | 3  | 4  |                        |
| 1 Do iron 3 shaver                                                                      | 91   | 13 | 6  |                        |
| 1 Do 2 Do                                                                               | 61   | 3  | 9  | Supplied from the      |
| 2 Coils Europe rope 4 inch                                                              | 165  | 5  | 8  | Marine Store           |
| 1 Marine's Compass                                                                      | 12   | 4  | 3  |                        |
| 2 lanterns small                                                                        | 29   | 13 |    |                        |
| 2 Cuts Spungum                                                                          | 48   | 15 | 7  |                        |
| 3 blocks 12 inch single                                                                 | 151  | 12 |    |                        |
| 3 Do double                                                                             | 2    | 45 | 8  | 4                      |
| 3 Do table                                                                              | 288  | 15 | 8  | Supplied by the        |
| 1 Coir Rope Europe 5 1/2 inch                                                           | 153  | 14 | 2  | Commissionary of       |
| 2 Do 5                                                                                  | 216  | 11 | 3  | Prothonary.            |
| 2 Do 2 3/4                                                                              | 56   | 12 | 11 |                        |
| Gunny bags and packing charges                                                          | 8    | 4  |    |                        |
| Total Rupees                                                                            | 4715 | 10 | 1  |                        |

Marchas  
Marine Officer  
22 October 1874

J. Taylor  
Acting Master Attendant  
Administrative Department

Dr. 1874 Debit.  
1874 7004.  
MARINE.

The MASTER ATTENDANT,

Escomada.

Dated October, 31st.

Recd. 1874 7004.

G.O. 31st October 1874, No. 397.

OCTOBER.  
L. OS. 47-48.

Eight House, Escomada. — The memorandum of  
expenses incurred on account of being operations  
transferred to the Public Works Department, and  
the proper arrangement to hand over the balance  
to the Department approved.

1874 1874 19-2-25.

Chelaps

1874 1874 19-2-25.

1874 1874 19-2-25.

1874 1874 19-2-25.

N/4  
No. 2437

8 P 4  
District Engineer's Office, Godav.  
Dowlaishweram, 30<sup>th</sup> October 1874.

From,

Major J. Beatty R.E.  
District Engineer Godavery.

To,

Colonel G. W. Walker R.E.  
Secretary to Government P. W. D.

Sir,

I have the honor to report on the subject of G. O. No. 2894 B. of 9<sup>th</sup> Instant, which has special reference to the provision of means of communication by steamer with the site of the iron light house, which is to be erected off Cocanada.

2. As nearly as I can judge, the site of the lighthouse will be about 11 miles on a bearing of E. by S., to E. by S.  $\frac{1}{2}$  S., from the Cocanada lighthouse, and about 8 miles on a bearing of N.E. by N., to N.E. by N.  $\frac{1}{2}$  N., from the Hope Island Light-house. All supplies of labor, materials, &c., when the work is under construction, must be taken out to the place from Cocanada, by water, a distance of about 11 miles.

3. I understand that Mr. Cheese-  
wright, the contractor's agent, who was  
lately at Cocanada, has left for Eng-  
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that will be required again at the con-  
struction of the lighthouse.

5. As the time when the state of the  
weather will be suitable is short, and  
the distance by water, which is the only  
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when the work is in progress.

6. In my letter No. 1067 of 4<sup>th</sup> July 1874  
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steamers

steamers on the Godavery, which I would now supplement by explaining their unfitness for use in the harbour, and the impossibility of sending them there in time for the lighthouse work.

7. The Godavery steamers are all now above the Dowlaishweram Annicut, and [with the exception of the two smaller ones, the "Little Bell" and "Fawn" neither of which would live in the slightest breeze at sea] cannot be taken down the canals, and therefore, if it were decided to take one of them to Cocanada, they must be floated over the annicut in some 8 or 9 feet fresh about July or August next [as there will be none before] and this would be too late for the lighthouse work. Besides, being all flat-bottomed and keel-less, they are unfit to encounter rough weather at sea, and it would be a very great risk both for the vessel and the lives of those on board to attempt taking one of them out of the river and round by sea to Cocanada.

8. As to the fitness of the Upper Godavery steamers

10 6

Steamers "Godavery", "Wurdah" and "Wynegunga", which may have been specially referred to in the Government order, I beg to state that, owing to their extremely light build and novel construction, they are quite unfit to enter Cocanada Bay.

9. These vessels are 140 feet long, 25 feet broad,  $3\frac{1}{2}$  feet deep, and perfectly flat-bottomed; they resemble nothing I know of so much as a photographer's toning bath. Shallow, rectangular, flat-bottomed, keel-less, driven by a stern paddle wheel, and open at top, they are only suited for river navigation.

10. Their hulls consist of eighth-inch steel plates, and the rivets are counter-sunk. There are no transverse ribs, but the steel plates are rivetted to longitudinal  $1\frac{1}{2}$  inch angle iron, placed 18 inches apart. There are no beams or other strengthening supports, and the vessels are perfectly open boats. Even when working on the river every precaution is necessary when encountering a head wind, by reducing steam,

steam, ~~see~~ to avoid severe strains on the rivets.

11. I consider them totally unfit for sea-going purposes, for which indeed they were never intended, because owing to their weak construction they could not stand an ordinary sea, and being open boats they must be swamped.

12. The only vessel we have at all adapted to Harbour work is the "Fred and May", and even she rolls greatly, being flat-bottomed and keel-less. But the "Fred and May" was dismantled several months since, and brought up to Dowlaishweram, to have a new boiler fitted in her. The boiler was to have been finished and shipped to Cocanada in May 1874, vide G.O. No. 1713 of 25<sup>th</sup> June 1874. but nothing further has been heard about it.

13. I can only suggest that as the "Fred and May" is not now likely to be ready for use in January the "Frank and Ada", her sister boat, should be

be recalled from Calcutta for this special duty. The "Frank and Ada" was sent to Calcutta for service in connection with the famine works, and as the famine is at an end, it is probable she can now be spared for other duty. She could be brought down the coast with perfect safety in the beginning of January.

14. But I may mention, Mr. Cheeswright informed me that in the case of another lighthouse he was employed on, Mr. Wells provided a steamer at his own cost, and at the conclusion of the work sold it, at their own request, to the Government for whom the lighthouse had been constructed. If necessary he would doubtless have no objection to do the same in this case.

I have the honor to be,  
Sir,

Your most obedient Servt.  
J. Beatty. Major R.E.  
District Engineer Godavery.

12

I think that it would have been better had this G. O. been referred to the District Engineer for explanation. I prefer this course to finding one Department of the Secretariat replying on another on practically the same paper. The District Engineer's letter of the 30<sup>th</sup> October gives useful information but is not a reply to the points raised by the Government Order.

J. H. 1874. No. 14.  
 The District Engineer  
 Godavery.

To  
 the Secretary to Govt.  
 P. M. Devaria

Dated 130<sup>th</sup>  
 Recd 7<sup>th</sup> November 1874.  
 No. 2437.

Reporting on the  
 usefulness of the  
 Godavery steamers  
 for use on Harbours  
 work off Coimbatore,  
 with reference to G. O.

No. 2894 B. of 9 October 1874.  
 No. No. 488-15-2-75.

No. 499  
 No. 26-1-75  
 No. 16-1-75  
 No. 12-1-75  
 No. 15-1-75

under Consideration

The fact seems  
to be simply that for  
all practical purposes  
the District Engineer  
relinquished his work  
to the Master Attendant  
by mutual arrangement.  
He seems to have been  
equal to the occasion.  
He deserves the credit  
which the District Engineer  
gave him the opportunity  
of showing.

I regret that I  
cannot take the same  
view of the matter as  
the Chief Engineer but  
am perfectly willing to  
forgo all censure in  
deference to his views.  
It

Is it not hard then  
that after mutual  
agreement and consent  
should have been  
used to stigmatise the  
other as not having  
given any help?

Wm. J.

13  
It is true that the order  
reached late, and he  
probably was unaware  
that the Lighthouse Agent  
was in Canada until  
he received it and  
therefore did not get  
into communication  
with him. I cannot  
find from the papers  
on which day or days  
he was first with Mr. Cheesworth,  
but the 8<sup>th</sup> September seems  
to have been the decisive  
day & the ~~last~~ <sup>Mr. Cheesworth</sup> does  
not say that it was  
the first occasion on  
which he had met the  
the District Engineer, from  
that interview the District  
Engineer seems to have  
given up any active  
part in the matter.

The District Engineer's  
letter of the 30<sup>th</sup> October is  
explained satisfactorily  
the inability to place  
steam power at his  
Mr. Chesswright's disposal  
& shows that the District  
Engineer gave such  
aid as was in his  
power and I would  
accept the explanation  
as satisfactory without  
going into particulars  
which may be gathered  
from the letter itself.

yes

I will not object  
to the substance of the  
last para appearing  
in the order. But surely  
it is very unsatisfactory  
that the Govt. should  
be thrown entirely

on Captain Cator and  
Mr. Chesswright in this  
matter. The District  
Engineer apparently  
accepts their work  
as sufficient for the  
purpose. If their  
work has not been  
reliable he should  
have said so.

14/11 M.

It struck me  
that Capt. Cator  
had too readily &  
too easily accepted  
this important matter  
by other hands & I  
hardly differ to think  
he should be  
in a better position at  
his landing zone &c.

did not intend  
 to state any further  
 probably & called.  
 Major B. is known  
 to be an excellent  
 Officer. but in this  
 matter he is right  
 I think have taken  
 a more prominent  
 part and attended  
 to the matter of more strongly  
 L.S.

He an excellent  
 Officer, and I have  
 much to say for  
 himself in the  
 matter raised

20/1  
 Very well  
 L.S.  
 27-1

167.  
 I must leave, all the  
 considered and with  
 refer to the matter of  
 Col. Walker - we need  
 not suppose any difficulty  
 in regard to Major  
 Dearth, who appears

Go. No. 488 - 19-2-75

P. W. D.

It is respectfully sub-  
 mitted that an in-  
 favourable view has  
 been taken by mem-  
 bers of Govt. of the pro-  
 ceedings of an Offi-  
 cer of the Pub. Works  
 Dept. in charge of a  
 most difficult District,  
 the work of which he  
 is managing to the  
 entire satisfaction  
 of the Chief Secy. P.W.  
 and the Secy. for Indus-  
 tries. A misapprehension  
 of the facts of the  
 case -

In the first place,  
 the Hon. Mr. Robinson  
 (see marginal note on the

The Hon. Mr. Robinson is in the habit of writing to the Hon. Mr. Robinson.

2<sup>d</sup> page of the Draft  
 has failed to enlarge  
 the fact that Dr. Chase  
 might, under Tele-  
 graphic instructions  
 from his employer,  
 reached Colorado  
 (24<sup>th</sup> July) long before  
 Major Beatty could  
 possibly have received  
 G.O. 11. 2170 of 7<sup>th</sup> Aug.  
 As pointed out  
 in the 2<sup>d</sup> para of the  
 draft he joined Mr.  
 Chase right & Captain  
 Lester immediately  
 he received his in-  
 structions. In fact  
 which para 3. of the  
 Draft shows Mr. Chase  
 might have supposed

*This of course is in the Ch. but  
 states that he could find the date of the  
 first interview on the 8<sup>th</sup> Sept. He re-  
 minders particularly his contact  
 Capt. Lester's hands.*

*It is not stated  
 that he has been  
 the first*

*same not prepared to assume  
 notice - think that it is the Regulator  
 that the D.L. resigned things so differently &  
 Mr. Lester of the he stated he described 1/31*

*If credit is not  
 here it arises,  
 it seems to me  
 from the D.L. resigning his  
 functions & then*

16  
 Captain Lester it was,  
 who knowing well that  
 the dist house was a  
 Public Work, failed to  
 place Dr. Chase with  
 in communication with  
 Major Beatty at once;  
 with, no doubt, the de-  
 vice to get the matter  
 into his own hands,  
 and obtain all the credit  
 for it. It is not the first  
 time that Capt. Lester,  
 in enteringprising and  
 able man, has obtain-  
 ed credit at the ex-  
 pense of the P.W. Offi-  
 cere, as Col. Walker  
 knows from personal  
 experience as mentioned  
 & He resigned by mutual  
 agreement, supposing he  
 was dealing with Gen. *But*

did not intend

Let Maptain after by  
all means retain the  
credit earned by his  
readiness of resources  
and personal courage  
shown in the attempt  
to carry out the work.  
But the Secretary ear-  
nestly intreats that  
a good Officer, whose  
circumstances have  
placed in a false posi-  
tion, may not be blamed  
for having simply ac-  
cepted these circum-  
stances, in the represen-  
tation of a man, like Mr  
Cheese-wright, whose course  
it were to judge him. The  
Govt have no evidence -

G.W.W.  
13.1.75

70. 488 - 19-2-75

P. W. D.

Proceedings of the Madras Government,  
Under date the 187

Read the following:-

Proceedings of the Madras Govt. (H.E. No. 388 of 22 Oct 74)  
in the Marine Department ( " 397 " 31 " " )  
Do Do ( " " " 243 " 30 " " )  
District Eng. Godavery ( " " " )

In a Despatch  
from the Secretary of  
State for India printed  
with L. O. No. 2170 of 7<sup>th</sup>  
August, it was an-  
nounced that the  
Regent of Mr. L. Dells  
might be expected at  
Locanada to under-

take operations for  
testing the nature  
of the site to be selected  
for a new Light House  
at Locanada in  
conformity

are unable to produce the  
Draft - Shukh Net No. 22 has  
been executed in order to  
be used justified in practice  
having a Draft of an unpro-  
posed Marine Office & Co  
all - 2/12 1906

I think the go-  
ing right to use  
the mine - and  
much to be for in  
a plan in front them at

Yes I do 22/12

1230/12

conformity with the instructions of Colonel A. Fraser R.E. recorded in L.O. No. 569 of 5<sup>th</sup> March. and the District Engineer of the Godavery was directed to afford him every assistance required in the execution of his work, and to arrange for the provision of such materials as he should <sup>want</sup> require.

In a letter recorded with L.O. No. 2581 B of 10<sup>th</sup> September the District Engineer reported that Mr Wells agent had arrived at the end of July (24<sup>th</sup>) but had not communicated with him being under the impression that all his

I cannot find the 8<sup>th</sup> 10/9

The D.E. rec'd the first instructions on 15<sup>th</sup> Aug. more than 3 weeks after the D.E. left for the work on the bridge in conformity with his instructions. I cannot find that Mr Wells had any means of knowing that orders had been issued

18  
his work would be done in communication with the marine department only - that after receipt on the 15<sup>th</sup> August of the instructions above referred to, he proceeded to Canada found Mr Cheeswright there, and had a consultation with him and the master attendant. <sup>They</sup> ~~He~~ had been unable to do anything on account of non-arrival of the Screw Pile that was to be put down to test the nature of the site; and even had it arrived the weather had been so bad that boring operations would have been

operations were made

been impossible. In his letter No. 2437 of 30<sup>th</sup> October the District Engineer further reports that having no officers to leave at Aca-  
-madow, and the Quarter Attendant being both willing and able to render every assistance necessary, he left the work in his hands.

Major Beatty would  
most assuredly have  
done more, but for  
having come to an  
understanding with  
nothing else was ac-  
quainted of him. He  
is an Administrative  
not an Executive Officer  
= cer

It would appear  
therefore that Mr  
Cochewright has erro-  
neously dated his  
first interview with  
Major Beatty on the  
8<sup>th</sup> September, and stated  
an impression that  
the work was then car-  
ried out by him with  
the assistance of officers  
of the Public Works Department.

She has not any kind of  
writing that we know of  
can not find the date of  
her entry  
(Supplies were —  
suggested false —

The)

19  
The Master Attendant does not appear to have communicated the fact of his arrival at the District Engineer; and must therefore be assumed to have acquiesced in the view that the work was entirely within his scope; his assistance appears to have been all that was necessary; and if he failed in obtaining the use of a Steamer it was because of the only two going Steamers belonging to the Public Works Department one had been despatched to Bengal, and the other was in want of a new boiler; and it is evident that everything in the Government

Dorchester at Dauloch.  
-weram was placed at  
the joint disposal of  
Captain Castor and Mr.  
Mr. Cheeswright, while  
certain necessary stores  
were obtained from the  
Public Works Dept.  
at Madras.  
That they failed in fully  
accomplishing their ob-  
-ject was evidently  
caused by the time  
for making the experi-  
-mental boring having  
been settled at home,  
exclusively with reference  
to Mr. Drell's convenience,  
and without reference  
to local authorities or  
to the right season of  
year.  
His Excellency the  
Governor in Council is  
unable to realize the

No one could have  
expected -

The, however, in  
regard to the  
... for it is  
... as all contain  
that Col. ...  
... to  
... were made,  
... of the ...  
... the work  
... will have to be  
... will be  
... with ...  
... work up the  
... in  
... started in  
... from ...  
... have been  
... to give way  
... circumstance  
... report  
... to have  
... a job at  
... in all  
... -

Yours  
...

grounds on which  
Mr. Drell's agent expresses  
his satisfaction with  
the results obtained;  
as he has not event  
been furnished with  
particulars of the  
boring on the sand-  
bank opposite the site  
selected, or of that in  
the bed of the main  
outlet of the Godavary-  
But presuming them  
to be sufficient for his  
employers purpose,  
it does not at all  
follow, as taken for  
granted by Major Beatty,  
that the materials of a  
Light house are at once  
to be sent out and put  
up.

also

up - Mr. Dello will no  
doubt submit his  
Proposals to the Secretary  
of State, for transmission  
to India, and they will  
require previous sanc-  
tion and provision  
of funds by the Govt  
of India, in anticipation  
whereof an entry of  
Rs. 1,50,000 will be  
made in the Budget  
of 1875-76, under the  
head of Miscellaneous  
Public Improvements.  
Subsequent Light House.

C. W. D.

To  
Dt. Sup. Godavery with memo  
Ref. to in Marine Dept. No. 397  
of 22-October-  
Marine Dept.

P. W. D.

Carb. 28

Proceedings of the Madras Government,  
Under date the

Read the following:-

Proceedings of the Madras Govt. } (M. No. 388 d/22 Oct 1871)  
in the Marine Dept. } (--- 397 d/31 ---)  
Do --- } (--- 2637 d/30 ---)  
District Engineer Godavery

Order No. 2581 B in the  
Public Works Department  
will be communicated to  
the Marine Department.  
From the District Engineer's  
letter to the Chief Engineer  
recorded therein, it appears  
that the Order of the 7<sup>th</sup>  
August No. 2170 reached  
Major Beatty on the 15<sup>th</sup>;  
and that on receipt of it  
he went to Locanada  
and had a consultation  
with the Master Attend-  
ant and Mr. Chesswright.  
also

M. 2/11

Sol.

3/2 1/2 p.m.  
D. P. as altered  
P. W. D.

Also that nothing had  
been, or could be done  
up to the date of that  
letter (27<sup>th</sup> August) on account  
of the nonarrival of the  
Experimental Screw Pile,  
which it was Mr. Cheese-  
wright's intent to put up,  
and of the state of the  
weather. Mr. Chesswright's  
arrival at Loocanada on  
the 24<sup>th</sup> July having been  
of long antecedent to the  
date or receipt of the first  
Order, and no report of his  
arrival having been made  
either by himself or Capt.  
Leator to Major Beatty,  
the action of the latter  
Officer in holding his  
first consultation with  
them sometime between

1st Oct

Under papers - Presumably the  
Capt. has private information  
on this point

Transmitted in the  
papers

Master transmitted  
in the papers

the 15<sup>th</sup> and 27<sup>th</sup> August<sup>27</sup>  
(not on the 8<sup>th</sup> September  
only as assumed in para 2  
of Marine Dept. Order  
No. 388 of 22<sup>nd</sup> October)  
[to have been  
does not appear dilatory  
At the various con-  
sultations held by them,  
which are further referred  
to in Mr. Chesswright's  
letter of 8<sup>th</sup> September re-  
corded with Marine Dept.  
Order No. 357 of 25<sup>th</sup> Sept.]  
It would appear to have  
been mutually arranged  
by all parties, that Capt.  
Leator's personal Coopera-  
tion would be sufficient  
for the purpose; which  
appears to have been  
the sole reason why  
more was not done by  
the District Engineer -  
That Officer's letter No.  
2437 of 30<sup>th</sup> October. now  
recorded

recorded, explains how  
it was that no steamer  
was available to assist.

3 The conclusion that  
is arrived at in the Public  
Works Department is, that  
the experimental boring  
has been a failure; and  
that its results are not  
likely to be acceptable  
to Col. Grace who re-  
commended it to the un-  
dertaken; or to the Govt.  
of India on whose account  
it has been made, and  
to whom as well as to the  
Secretary of State for India  
this opinion must be  
communicated. Such  
failure is not however  
attributable to lack of  
cooperation of any one  
individual

individual or department;<sup>23 10</sup>  
but simply to the inaus-  
picious season at which  
the experiment was con-  
ducted in consequence  
of Mr. Wells' representa-  
tives having been avail-  
able to superintend it  
at that time, and no  
opportunity having been  
afforded of representing  
its unfitness for the  
undertaking of such

mit  
The D. G. Godavery  
Public Works Department  
10. 2. 1871

Dec 25-2-75

Public Works Dept.  
24  
To The Secretary to the  
Govt. of India  
P. W. Dept.

Sir,

With reference to para  
3 of my letter No. 1 B. dated  
5<sup>th</sup> March 1874, I am now directed  
by His Excellency the Governor  
in Council to forward the  
accompanying papers in  
which are detailed the pro-  
ceedings taken with reference  
to the preliminary borings  
for the Seven Pile Lighthouse  
at Locanada; <sup>in order that</sup> ~~from which~~  
the Govt. of India <sup>may have</sup> ~~will gather~~  
~~the meaning of~~ <sup>the opinion</sup> ~~the~~ <sup>not satisfied as to the nature</sup>  
of their result.

C. M. W.

Dep. Secy to Govt. of India  
P. W. Dept.  
1874-75

4/2 - 1.45

11/4/75

11/4/75

60-26-175

695-3

7064

697

Print very urgent

18/2/75

Feb 1-75

Post

6953 7064 6970

Govt. of Madras.

PUBLIC WORKS.

*Mr. J. J. [unclear]*  
*Secretary*  
*Public Works*  
*Madras*

Dated

Recd.

Encl.

4-25/80  
 4-27/80

1875, No.

Nos. 497-501.

488  
 489

Oceanada Light-House

Order No. 2581 B in  
 100 depth. Comd to the  
 same depth in the ob-  
 servations -

Forwarding papers  
 in whole, are detailed  
 the proceedings taken  
 with reference to the  
 preliminary boring  
 for the Screw Pile  
 Light-House at  
 Oceanada - in order  
 that the C. S. of India