

*Proceedings of the Madras Government, Public Works Department,
17th November 1875*

Read the following papers —

No 416 From Major J BLATTY, R E, Acting Superintending Engineer, Godavery District, to Major-General G W WALKER, R E, Secretary to Government, Public Works Department, dated Dowlaishweram, 11th September 1875, No 1,799

With reference to G O, No 1,983, of 12th July 1875, I have the honor to report that the Range Officer stopped all work on the south groyne immediately on the receipt of those orders, as it was understood that the Marine Department would carry on the work to completion.

2 The expenditure incurred by this department on that work in the current year has been Rupees 1,370-8-0 This includes some payments still to be made to contractors for materials delivered There is consequently a balance of the allotment* of Rupees 8,630 to be worked out by the Marine Department.

*Rupees 10,000

3 The Master Attendant has been furnished with copies of the plan of the work and of the original and revised estimates

TRANSFERRED to the Marine Department with reference to the orders quoted within.

OOTACAMUND, (Signed) G W. WALKER, Major-General, R.E,
21st September 1875 Secretary to Government, P. W. D.

From Captain J. H TAYLOR, R N R, Acting Master Attendant, Administrative Department, to the Hon D. F. CARMICHAEL, Officiating Chief Secretary to Government, Marine Department, Fort St. George, dated Madras, 28th September 1875, No 6,234

I HAVE the honor to report, for the information of His Excellency the Governor in Council, that on receiving permission by your telegram I repaired to Cocanada and completed a careful examination of the port and the plant to be made over to this department I have examined and consulted about the nature and extent of the works in progress, and the changes that are absolutely necessary to the efficient condition of the port Before proceeding, I am desirous of explaining most respectfully that, in applying for the charge of the river below bridge and the port from its present guardians, I am solely guided by the conviction that circumstances have altogether prevented a proper scrutiny into the wants and interests of the port, which has now undergone a material change of position It is now no better or higher than Calcut, Bimlipatam or any other open roadstead with large trade That is as far as the shipping is concerned, and the only duty that now devolves upon Government is that of providing for the boat traffic between the shipping and the shore, which duty in such an expensive place should, as far as port funds are concerned, be conducted in the most economical manner consistent with efficiency Having the good fortune to possess in Captain Castor an able and indefatigable assistant, whose capacity for this kind of work has been tested at Cochin and elsewhere to the satisfaction of Government, and having within ready communication the talent and experience

of the Chief Engineer of the district should difficulties present themselves requiring scientific treatment, I am quite ready and willing to accept the responsibility of doing full justice to the mercantile and shipping requirements

2 The dredging of the river bar and keeping the line of communication clear is the first object To effect this, the District Engineer has made over two dredges and nine punts, to be increased to twelve when the others come down from Dowlaishweram The condition of this plant is much as described in Colonel Mullins' letter plus the subsequent deterioration It has suffered very much from exposure and want of proper professional attention, and there is a very great deficiency of very many minor necessities In fact, the Dredge Superintendent informs me that, for some years, it has been the custom to work the dredges singly, using the united stores of each to make up one complete vessel, hence it is not to be wondered that the quantity of work done has been less than might have been expected, or that either vessel left without the care of a crew for many months should be found proportionately injured I propose to keep one dredge at first in proper working order, hoping she will do all that is wanted, indeed the balance of the grant to be made over is so small that such a step is rendered imperative One has just come out of a mud dock, and it is supposed her bottom is in good order She will be selected, and the other got into a similar dock for examination Owing to the absence of any lists of stores, &c, or any properly qualified person to go into details, some delay has arisen between the Superintendent and Captain Castor, for Major Beatty informs me now by letter that some good buckets and other stores have been found at the Dowlaishweram Workshop, but their existence was previously unknown to Captain Castor, who reported upon what was given over to him alone It appeared to me, and I advanced my opinion to Major Beatty, that the transfer should be a perfectly business-like transaction Either the plant should be made over ready for work and a joint inspection of it made, or the defects should be gone into jointly and proper inventories of all stores furnished Log books should, of course, have been kept throughout the dredging in engineering form, and accounts of stores audited occasionally A large amount of minor necessities will have to be indented for before work can be begun It has now been arranged by General Walker and myself that Captain Castor takes everything that is given to him, and makes out his own list and indent This will greatly increase his labor, but is certainly the only course available under the circumstances, the favorable state of the river not calling for any immediate activity

This question of dredging compels me again to bring before Government the condition of the southern revetment, to which I drew attention in a former report I am afraid I did not make my meaning sufficiently clear on that occasion I object to it, not as an engineering work for the protections of the town or any scientific purpose, but as an unnecessary outlay of port funds by not assisting in any way in the navigation of the river, and in support of my opinion I beg to draw the attention of His Excellency in Council to the following facts —The river has been for many years in the state it is now in, and in the gradual process of silting up of the delta, the large flats to the southward of the river are fast becoming reclaimed land, and portions of them are already being used for grazing purposes The artificial portion of the Cocanada river has, in the course of this time, assimilated itself to the new arrangement of nature, and has been draining this flat, and thereby assisting greatly in bringing about the present favor-

able state of things There can be no rational fear of its changing its course, or breaking its bounds, without some great convulsion, such as an earthquake, or the destruction of the anicut By the present judicious system of irrigation of the delta, the Godavery water is diverted from the Cocanada stream, and no freshes of a turbulent nature now occur The period of my visit was chosen at spring tide, and very fortunately a rising of the Godavery to a height of 7 10 above the anicut took place There was no excitement in the Cocanada river, nor was there any a few weeks before, when I am told a rise of 16 feet occurred The only attacks that have been made upon Cocanada during late years have been from seaward during storms, strong north-east winds, and high tides Soon after my former report had been delivered, an order was passed to prosecute the work of the groyne expeditiously, this was acted upon, and before the rainy season a large portion of the revetment was set up When the rains fairly set in, this became an obstruction to the natural system of drainage I have adverted to, and, as a necessary consequence, the flat became a swamp The villages and outlying portions of Jaganaikpoorum became inundated, petitions poured in, and it became clear that expensive masonry culverts and regular system of drainage had been rendered imperative But before anything could be effected, the sapping of the revetment had ended in slipping a very great portion of it quietly down into the river, where it now lies In the interests of the navigation, I would not wish to meddle with it; but if it is considered advisable by His Excellency in Council to make a permanent wall, and adopt a system of drainage out of port funds, then I would very respectfully urge that the land should be made over to the port, and the value, which it must ere long acquire, credited to the fund It would be an excellent Municipal speculation. building is already progressing along the north bank, but it carries itself out of the Marine Department

3 A portion of the southern bank, as may be seen by the plan* of the river forwarded with this, is protected by mangrove bush This might be easily extended without expense, this would sufficiently indicate the bank, and would bend to any extraordinary attack from either side, and recover afterwards Now I have shown above that there being only one dredge, and the removal of the bar being the first consideration, the prosecution of both works must rest in the same hands. The spoil can of course be deposited behind the upstanding portion of the groyne, but if Major Beatty does not object, I would advise that no present effort be made to rebuild the fallen portion for a season, but that Captain Castor be directed to keep a large scale plan before him, and carefully note monthly any changes that may occur, or any circumstances that may serve as guides to future action.

4 The extreme portion of the north groyne requires some additional protection, which will be given before the north-east monsoon

5 To assist the dredging and generally serve river purposes, the small steamer *Frank and Ada* has been made over. She has already proved herself very useful, indeed the survey of the bay just concluded has been entirely carried out in her, and could not have been done without her assistance, but she is in very bad condition, and the Commander of the Survey has several times been on the point of giving her

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17th November 1875.*

up as unseaworthy. Her plates are corroded through in many places, and her machinery wants looking to, her decks are very defective. I would beg to advise that the *Fred and May* be put in order and substituted for her. This vessel has new bottom plates, new deck, new boiler, and should with care have many years active service in her. The *Prince* is altogether too large for the river, and not suited for the sea. It would be better to sell to the highest bidder both her and the *Frank and Ada*, selecting the most promising market.

6. The *Frank and Ada* never rises to a five knot speed, and the tides in the river and the breezes outside are often strong, and a fairly powerful boat is required for towing; her forty horse-power, under proper condition, ought to be ample. It is believed that the *Fred and May* with new boilers will suffice.

7. The next subject of importance is the contemplated change of position of the Cocanada light. Until this is effected, Godavery Point will always be a bugbear and a danger. The point has extended so far to the north-east that the light is embayed by it. The light in its present situation and the expensive buoys moored round in the shoal water are the remains of the old ship harbour arrangements, and until they are removed and a proper leading light to the roads given, I feel myself justified in saying that the harbour has not been abandoned practically. The light tower requires to be placed about four miles to the northward of its present site, opposite the shipping as they now ride. Captain Hammond, Commanding the Survey Expedition, Captain Castor, and myself examined the coast on the 20th August. We selected a spot where topes of Cocoanut trees of great height showed the ground to be binding, and a well of fresh water with 11 feet of earth above the water showed it to be deep enough for foundation, and suitable for mixing chunam, which is also drawn from the immediate neighbourhood. This spot we have marked in the new chart as the probable site, if sanction is granted for the transfer.

8. If the 4th order Dioptric revolving light now at Cocanada is elevated here, navigators will have nothing to do after passing Hope Island light, but stand straight up along the coast until they bring this new light on a proper bearing, and then make straight for it, and those coming from the north will have only to guard against passing it unseen. The establishment of the old light would suffice for the new, and a great portion of the expense of erecting the new column might be defrayed by the sale of the materials of the old one which are valuable. The plans for lighthouse, quay, &c, have been, I understand, forwarded direct to Government, except the brick column by a Native contractor, which is with Major Beatty for examination and report.

9. The different estimates drawn up for constructing this lighthouse are three from Major Beatty, and, "quoting from a letter of his," as follows —

A brick column	Rs.
A cut stone do	7,730
An iron staging suggested by Mr Larminie	10,300
And a brick column estimated by a Native contractor, giving	12,790
guarantee for the due performance of the work	4,500

10. I would beg respectfully to submit that this work is a very necessary one, and if carried out the question of the expensive screw-pile lighthouse on the point might be re-considered. I myself, looking to the navigation of the point, am of opinion that with this alteration and a better, say second-class Dioptric light,

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11. In connection with this subject of the removal of the lighthouse, the alteration of the limits of the port has to be considered. After searching for the northern obelisk for some time, it was discovered in a field more than a mile inland, about three miles from the Cocanada river, with several fields bordered with palmyras, and villages between it and the coast line. It was constructed in attention to Government Order, Marine, 12th October 1859, No 6,030, only sixteen years ago, and it is only reasonable to suppose that it was well in sight of the shipping, say a quarter of a mile from the sea. Now the recovery of beach to Godavery Point seems only to have effect in the bay between Oppadah house and the point. I would, therefore, recommend that, in lieu of erecting another boundary mark, the northern limit of the port be extended to Oppadah house. It is necessary to have some well-defined boundary for legislative purposes.

12. Inside the river the passengers' landing-place sanctioned by Government is, under Captain Castor's direction, rapidly approaching completion, it is a very satisfactory solid piece of work, and will be most useful. The larger and more really essential undertaking, viz, the quay for landing and shipping goods, for which purpose the old one has become insufficient, was suspended, pending a reference to the Public Works Department concerning the estimate and the construction of the roof. It would otherwise have been in the same forward state. The cranes and other adjuncts are ready on the spot, and some of the material was purchased in anticipation. I beg respectfully to submit that, although Captain Castor's estimate and plan were informal, they were prepared by himself with a full knowledge of his wants and requirements, and I have no doubt he would furnish a quay, "within his estimate," in every way suited to the port. The old one has recouped its original cost by fees, and finished its existence at the same time. With regard to the roof, a mat one, as originally proposed, would be much more easily repaired after storms without any other requisition than native labor, and the expense of making a roof so elaborately as to allow sheet iron to be fastened on it would be a very serious addition to the outlay, although, if once done, it might be of superior appearance and even utility; still it would take many years before it would restore a money equivalent. I am of opinion it would, considering the many shipping and mercantile requirements of the quay, be advisable that, whatever plan be selected, the execution should devolve on the Marine Department in conjunction with the other works. I regret very much to be obliged to bring so many requirements for this port of Cocanada to the consideration of His Excellency the Governor in Council, but their several necessities have from time to time been admitted, and if the port is now finally settled on a satisfactory basis, I have no doubt that, by a careful attention to its condition, and an equitable separation from its expenditure of all that is not fairly debitable to port funds, a favorable change in its balance will soon be established.

No 416-A. From Captain J H TAYLOR, R N R, Acting Master Attendant, Administrative Department, to the Hon. D. F CARMICHAEL, Officiating Chief Secretary to Government, Marine Department, dated Madras, 29th September, 1875, No. 6,268.

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17th November 1875.*

have received a letter from Major Beatty, District Engineer, in which he states that an Assistant Engineer has been appointed to make over the plant at Cocanada to the Master Attendant, by which action the portion of my report bearing on that subject has been rendered unnecessary, and I respectfully beg that it may be cancelled. I am in hopes that the new dredge *Albuquerque* will, during the Cochin rough season, be able to go round to Cocanada, and make herself useful there if necessary. As regards her Cochin work, I cannot find any mention made of punts or barges for her use. The papers in my department merely describe the vessel herself, and I have not heard of any preparation for her at Cochin or elsewhere. If this has been overlooked, it might be advisable to take advantage of the present fine weather to send four punts round from Cocanada, or have an estimate called for at once for building four teak barges at Cochin, whichever plan recommended itself for economy.

2 If the Marine work at that port is, as I suppose, to be made over to the Marine Department, I ought to be on the look-out for an efficient Commander for the *Albuquerque*, for no doubt her present crew are only put on board for the voyage. As she is an expensive vessel, and her duties are very comprehensive, she ought to be placed in careful hands. The establishment for such a vessel would change greatly with the nature of the duties, but a Commander and Engineer must be attached to her permanently, and be in readiness to take charge when the contract with the builder expires.

No 627

REFERRED to the Public Works Department for remarks

(Signed) D. F. CARMICHAEL,
Officiating Chief Secretary.

1st November 1875.

No 417 ORDER THEREON, 17th November 1875, No 3,294

ACCOUNT, No. 10.

It is remarked with reference to the latter part of paragraph 2 of Captain Taylor's letter, that the work of defining the course of the Cocanada river by extending the southern groyne or revetment parallel to and to the full extent of the northern, is one which was recommended by the Harbour Engineer Mr Robertson at page 73 of his report. Its completion has already been insisted on in G O, No 1,271, of 5th May, and the District Engineer, Godavery, will be required to report annually on the progress made by the Master Attendant of Cocanada in carrying out the revised estimate of Rupees 40,000, sanctioned in G O, No 2,359, of 16th August 1875. It is observed that the total outlay by the Public Works Officers has been

Up to end of 1874-75	Rs 18,008
In 1875-76	1,370
	<hr/> 19,378

Rupees 19,378, that Rupees 8,630 of the current year's allotment is available, and that an allotment of Rupees 10,000 has been made in the budget of 1876-77, from port funds, to which the charge is clearly debitable. It is possible that a mistake has been made in not providing some breaks in the continuity of the revet-

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ment to facilitate the drainage of the space behind, and the District Engineer will consider whether the estimate should not be supplemented by some provision for bridging such gaps, if they are found necessary. They may be furnished with narrow temporary crossings meanwhile, or be sloped and paved.

2 It is too late now to substitute the steamer *Fred and May* for the *Frank and Ada*. The latter has already been long at the service of the Marine Department for the Master Attendant's visits to Vizagapatam and examination of its harbour; the survey of Cocanada Bay has been entirely carried out in her, and she was by G O, No 1,271, of 5th May, formally transferred for the dredging operations for which Captain Taylor's report of 23rd March specially selected her. It is observed that in the same report he wrote most disparagingly of the *Fred and May* with reference to her fitness for marine purposes, regarding which he was doubtless then misinformed. Captain Taylor will now be requested to state whether he can utilize the *Fred and May* in addition to the *Frank and Ada*. If not, the former vessel will be transferred to the Irrigation Department, as requested in the District Engineer's letter recorded with G O, No 1,982, of 12th July.

3 Since writing his letter of 28th September, Captain Taylor has selected the District Engineer's plan and estimate of Rupees 6,600 for the new lighthouse at Vakalapudi, which has accordingly been sanctioned in G O, No 3,103, of 2nd November 1875. His suggestion that it should supersede the construction of the new lighthouse on Hope Island, recommended by Mr Robertson, must be referred for orders of the Government of India as an Imperial question.

4 The District Engineer's plan and estimate of Rupees 8,500 for a landing and shipping quay at Cocanada were sanctioned in Marine Department Order, No 351, of 11th October 1875.

5 Nothing is known in the Public Works Department regarding the *Albuquerque* which was ordered for marine works at Cochin. There are no public works in operation or being planned at that harbour in conformity with G O, No 27, of 7th January 1875, passed on Captain Taylor's report.

(True Extract)

(Signed) G. W. WALKER, Major-General, R.E.,
Secretary to Government.

To the Marine Department

- „ Master Attendant, Administrative Department.
- „ District Engineer, Godavery
- „ Controller of Public Works Accounts
- „ Chief Engineer for Irrigation

Exd E. C. Shunker.
Spare Copies

Administrative Department

Madras 10

N: 6234

Marine Office

From

28th September 18

Captain J. H. Taylor R. N. R.

Acting Master Attendant

Administrative Department

Madras

To

The Honorable J. H. Carmichael

Officiating Chief Secretary to Government

Marine Department

Fort Saint George

Sir

I have the honor to report
for the information of His Excellency
the Governor in Council, that, in
pursuance of your telegram, I repaired
to Cocanada, and completed a careful
examination of the Port and the plans
to be made over to this Department. I
examined and consulted about the nature
and extent of the works in progress,
and the changes that are absolutely
necessary to the efficient completion of
the Port. Before proceeding, I am desirous
of explaining most respectfully that, in
applying for the change of the river
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present guardians, I am solely guided by
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full justice to the Merchantile and
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2 The dredging the river bar
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this plant is much as described in
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saries. In fact, the Dredge Super-
intendent informs me that for some
years it has been the custom to work
the dredges singly, using the united
stores of each to make up one complete
vessel, hence it is not to be wondered
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I propose to keep one dredge at first

in proper working order, hoping she
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over is so small that such a step is
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out of a small dock, and it is supposed
her bottom is in good order. She will be
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dock for examination. Owing to the absence
of any lists of stores &c., or any properly
qualified person to go into details, some
delay has arisen between the Super-
intendent and Captain Baster, for Major
Beatty informs me now by letter that
some good buckets and other stores
have been found at the Daulowshewam
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Either the plant should be made over
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Captain Baster
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Beatty's
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favourable state of the river not calling
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of dredging compels me again to bring
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Southern settlement, to which I drew
attention in a former report. I am afraid
I did not make my meaning sufficiently
clear on that occasion. I object to it not
as an engineering work for the protection
of the town or any scientific purpose, but
as an unnecessary outlay of Public funds by
not assisting in any way in the navigation
of the river, and in support of my opinion
I beg to draw the attention of the
Excellency in Council to the following facts.

The river has been for many years in the state it is now in, and in the gradual process of silting up of the Delta, the large flats to the southward of the river, are fast becoming reclaimed land, and portions of them are already being used for grazing purposes. The artificial portion of the Cocanada river has, in the course of this time, assimilated itself to the new arrangement of nature, and has been draining this flat, and thereby assisting greatly in bringing about the present favorable state of things. There can be no rational fear of its changing its course, or breaking its bounds, without some great convulsion, such as an earthquake, or the destruction of the dam. By the present judicious system of irrigation of the Delta, the Godavery water is diverted from the Cocanada stream, and no freshets of a turbulent nature now occur. The period of my visit was chosen at spring tides, and very fortunately a raising of the Godavery to a height of 7 or 10 above the ancient took place. There was no excitement in the Cocanada river, nor was there any a few weeks before, when I am told

a rise of 16 feet occurred. The only attacks that have been made upon Cocanada, during late years have been from seaward during storms, strong N. E. winds, and high tides. Soon after my former report had been delivered, an order was passed to prosecute the works of the dykes respectively. This was acted upon, and before the rainy season a large portion of the revetment was set up. When the rains fairly set in, this became an obstruction to the natural system of drainage I have alluded to, and as a necessary consequence the flat became a swamp. The villages and outlying portions of Jagannathpuram became inundated, petitions poured in, and it became clear that extensive masonry culverts and regular system of drainage had been rendered imperative. But before anything could be effected, the sapping of the revetment had, indeed, in shipping a very great portion of it quickly down into the river, where it now lies. In the interests of the navigation, I could not wish to meddle with it, but if it is considered advisable by His Excellency in Council to make a permanent wall, and adopt a system of drainage int.

of Port Thule, then I would very respectfully urge that the land should be made over to the Post, and the value, which it must ere long acquire, credited to the Fund. It would be an excellent Municipal speculation: building is already progressing along the north bank, but it carries itself out of the Marine Department.

3. A portion of the southern bank, as may be seen by the plan of the river furnished with this, is protected by mangrove bush. This might be easily extended without expense: this would sufficiently indicate the bank, and would tend to any extraordinary attack from either side, and recover after winds. Now I have shown above that there being only one bridge, and the removal of the bar being the first consideration, the prosecution of both works must rest in the same hands. The spoil can of course be deposited behind the upstanding portion of the groyne, but if Major Beatty does not object, I would advise that no present effort be made to rebuild the fallen portion for a season, but that Captain Coates be directed to keep in large scale plan before him, and carefully note monthly

* it is requested that the plan may be returned

monthly any changes that may occur, or any circumstances that may serve as guides to future action.

4. The extreme portion of the North Groyne requires some additional protection, which will be given before the N. E. monsoon.

5. To assist the dredging and generally serve river purposes, the small steamer "Frank and Ada" has been made over. She has already proved herself very useful. Indeed the survey of the bay just concluded has been entirely carried out in her, and could not have been done without her assistance, but she is in very bad condition, and the Commander of the Survey has several times been on the point of giving her up as unworthy. Her plates are corroded through in many places, and her machinery wants looking to, her decks are very defective. I would beg to advise that the "Fred and May" be put in order and substituted for her. This vessel has new bottom plates, new deck, new boiler, and should with care have many years' active service in her.

her. The "Princess" is altogether too large for the river, and not suited for the sea. It would be better to sell to the highest bidder both her and the "Frank" and "Aloa", selecting the most promising market.

6 The "Frank" and "Aloa" never rises to a fair boat speed, and the tides in the river and the breezes outside are often strong, and a fairly powerful boat is required for towing; her forty horse power, under proper condation, ought to be ample. It is believed that the "Fred" and "May" with new boilers, will suffice.

7 The most subject of importance is the contemplated change of position of the Buchanan Light. Until this is effected, Godavery point will always be a bugbear and a danger. The point has extended so far to the N.E. that the Light is embayed by it. The Light, in its present situation, and the expensive buoys marked round in the shoal water are the remains of the old ship Harbour arrangements, and until they are removed and a proper leading light to the rocks given, I feel myself justified

10 7
in saying that the Harbour has not been abandoned practically. The Light tower requires to be placed about four miles to the northward of its present site, opposite the shipping as they now ride. Captain Hammond, Commanding the Survey expedition, Captain Crocker and myself examined the Coast in the 20th August. We selected a spot where tops of Coconut trees of great height showed the ground to be binding, and a well of fresh water, with eleven feet of earth above the water, showed it to be deep enough for foundation, and suitable for mining Chumam, which is also drawn from the immediate neighbourhood. This spot we have marked in the new chart as the probable site, if sanction is granted for the transfer.

8 If the 4th Order Droyter revolving Light now at Buchanan is elevated here, navigators will have nothing to do after passing Hope Island

Island Light, but stand straight
up along the coast until they bring
this new light on a proper bearing, and
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The establishment of the old light
would suffice for the new, and a great
portion of the expense of erecting the
new Column might be defrayed by
the sale of the materials of the
old one, which are valuable. The
plans for Lighthouse, Quay &c have been
understand, forwarded direct to Government.
except the brick Column by a native
Contractor, which is with Major Beatty
for examination and report.

The different estimates drawn up
for constructing this Lighthouse are three
from Major Beatty, and quoting from
a letter of his as follows—

A Brick Column	Rs. 40
A Cut stone	7730--
As now staging suggested by Mr. Larmer.	10,300--
and a brick Column estimated by a native Contractor, giving guarantee for the due performance of the work.	12,790--
	4500--

10 I would beg respectfully to submit
that this work is a very necessary one,
and if carried out the question of the
expensive screw pile lighthouse on the
point might be reconsidered. I myself,
looking to the navigation of the point,
am of opinion that, with this alteration
and a better, say 2^d Class Dioptric Light
on Hope Island Column, Cocanada
would be sufficiently provided for.

11 In connection with this subject
of the removal of the Lighthouse, the
alteration of the limits of the port has
to be considered. After searching for the
northern obelisk for some time, it was
discovered in a field more than a mile
inland, about three miles from the
Cocanada river, with several fields bordered
with palmyras, and villages between it
and the coast line. It was constructed
in attention to G. Munn 12th October 1859,
No 6030, only sixteen years ago, and it is
only reasonable to suppose that it was
well in sight of the shipping, say a
quarter

quarter of a mile from the sea. Now the
recovery of beach to Godavery point seems
only to have effect in the bay between
Oppachala house and the point. I would
therefore recommend that in lieu of existing
another boundary mark, the northern
limit of the Port be extended to Oppachala
house. It is necessary to have some well
defined boundary for legislative purposes.

12 Inside the river the passengers'
landing place, sanctioned by Government,
is, under Captain Caster's direction, rapidly
approaching completion, it is a very satisfactory
solid piece of work, and will be most
useful. The larger and more really essential
undertaking, viz the Quay for landing and
shipping goods, for which purpose the
old one has become insufficient, was
suspended, pending a reference to the
Department Public Works, concerning the
estimate and the construction of the roof.
It would otherwise have been in the
same forward state. The Cranes and
other appurtenances are ready on the spot,
and some of the material was purchased
in

in anticipation. They respectfully to
submit that, although Captain Caster's
estimate and plan were informal, they
were prepared by himself with a full
knowledge of his wants and requirements,
and I have no doubt he would furnish
a Quay, within his estimate, in every way
suited to the Port. The old one
has risen its original cost by fire,
and furnished its existence at the same
time. With regard to the roof, a mat
one, as originally proposed, would be
much more easily repaired after storms
without any other requisition than water
labour, and the expense of making as so
so elaborately as to allow it not to be
fastened on it would be a very serious
addition to the outlay, although, if done,
it might be of superior appearance
and even utility, still it would take
many years before it would restore a
money equivalent. I am of opinion it would
considering the many shipping and
mercantile

mercantile requirements of the Quay,
 be advisable that, whatever plan be
 selected, the execution should cleave
 on the Marine Department in conjunction
 with the other works. I regret very
 much to be obliged to bring so many
 requirements for this Port of Command
 to the consideration of His Excellency
 the Governor in Council, but their
 several necessities have from time to
 time been admitted, and if the Port
 is now finally settled on a satisfactory
 basis, I have no doubt that, by a
 careful attention to its condition, and an
 equitable separation from its expenditure
 of all that is not fairly debitable to
 Port Funds, a favourable change in its
 balance will soon be established.

I have the honor to be

Sir

Your most Obedt Servant

J. W. Taylor
 Acting Master Attendant
 Administration Department

AH

General DEPARTMENT.

Nos 392 & 395.

From

The Asst. Quarter Master, Ecuador.

Dated 28 & 29 Sept. 1875.

FOR ORDERS.

I've read all Capt. Vay's
papers about & of
Walker's independence

12/10 1875

Think the papers should be referred to Mr. W. as suggested so as to bring regularly our record Gen. Walker's remarks. But I think that the papers should have been formally referred to the P.W.D. for remarks. & that this last letter be

GB-17 November 75

Received 1875-Sept

From

The Asst. Quarter Master
Administrative Department

to

The Chief Deputy to Govt.
Marine Department
Port of San Francisco.

Dated 28 Sept 1875

Recd 1st Oct 1875

Ind. 2

No. 6254

13/10/75

Admiral's report on the part
of Ecuador and the plans
made over to Mr. S. L. C.
Suggs the transfer of the
Southern Express work to the
Marine Dept and the removal
of the Ecuadorian Dept. & the
transfer of its present etc.

13/10/75

Dear Sir

As can be seen from
Gen. L. J. paper in the
Brief. p. 10. - &
he can't embody the
inform. it conveys
in a Marine G.O.
purporting to be drawn
by a civilian etc.

Yours
S. B.

It appears from that the
Sgt. are called ^{on} to make up
their minds on the follow-
ing points, and have to
enforce consistent action
in each case as they
may arise -

1. Bridging the River, and
completing the depuration
ditch course by extending
the Southern levee from
L. 10,000 to the full extent
of the Northern. This
is a work recommended
by the Harbour Engineer,
Mr. Robertson, in page 73.
of his Report - An Act of
£50,000 was sanctioned
for it in G.O. N. 1868 of 23rd July
1873, which was subsequently
reduced to £40,000; see
G.O. N. 235 of 16th Aug 1875 - Of
that sum £8,000 had been
spent out of Port funds up
to 31st March last; and
£10,000 (Port funds) have
been allotted for it in 1875-76
Budget Item N. 81. It
having been determined
that all Dredging Work
shall be carried on by the

Maine Dept. and all the
Dredging Plant transferred
to it, the work of the Sen-
thern Engine must neces-
sarily be handled over to,
as its progress depends upon
that of the River dredging
in great measure -

Captain Taylor, in opposi-
tion to Mr. Robertson, con-
siders the Southern Engine
ineffectual towards im-
proving the River, and
suggets the cutting of Port
Juno on it - It is possible
that a mistake has been
made in attempting to
carry out the Engine com-
mission, and that
occasional breaks should
occur in it to admit of
the drainage of ground
behind - But I cannot
think that its extension
similarity to the Northern
Engine, can be anything
but desirable - It has been
inserted in in several orders,
specially in N. 1271 of 5th
May 1875; and to ensure
Captain Taylor's carrying on

The work proposed, the Dist.
Engineer should be called
on to report progress on it
yearly till completed - It
is of course open to discuss
whether the Port or Provin-
cial Funds should be spent
on the work -

2. The substitution of the
Steamer Fred & Mary, for
The Frank & Ada - In his
Report on Locamunda 11th 1913
of 23rd March, Captⁿ Taylor
selected the Frank & Ada
for dredging purposes at
Locamunda and for going;
she has been at this service
for visiting and reporting
on Vigaga Putnam, and he
states that the survey of
Locamunda Bay has been
entirely carried out in
her - The Frank and Ada
was accordingly transferred
to the Maine Dept. by G.O.
N. 1271 of 5th May - Captⁿ
Taylor now requests that in
lieu of her, the Fred & Mary

may be substituted; a
report of which his (Gen.
Mendenhall) Report states, "The
"is not the class of boat
"to aid in Marine Works".
"There is no Port in the
"court where her presence
"is desirable, or could be
"remunerative". "I cannot
"not think the Fred & Mary
"could answer any more
"use for the Port & would
"be accountable"!!! The
P. W. Dept. cannot take back
the "Fred & Mary"; but will
not object to the "Fred & Mary"
being handed over to the
Marine Dept. on the under-
standing that Capt. Taylor
will make his own ar-
rangements for getting rid
of the "Fred & Mary". It is
much more likely that
he will do so successfully
than that the P. W. Officers
can manage it. Indeed,
he might well be asked to
undertake the disposal of
the "Prince" for the P. W. Dept.

3. New Light House, 4 miles
North of Neenah. No less
than 3 alternative plans
have been prepared by
Major Deady, all of which
have been sent to Capt.
Taylor for report. He ap-
parently prefers a 4th
plan, prepared by a com-
missioner, in account of its
cheapness. The ques-
tion is whether this Light House
will supersede a new one
on Stape Island, suggested
by Mr. Robertson, should
be referred to the Secy. of
Interior for decision.

4. Landing & Shipping
Quay. The District Engineer
Plan & Estimate have been
approved in the P. W. Dept.
and transferred to the
Marine Dept. for orders.
Captain Taylor apparently
prefers a Plan & Est. of Capt.
Carter's, because they are
cheaper.

Walker Major Genl.
Chief Eng. S. P. Co.

No. 6268

Madras
Marine office

29th September 1875.

From

Captain J. H. Taylor R.N.

As Master Attendant

Administrative Department

To
The Honorable D. J. Carmichael

offg. Chief Secretary to Government

Marine Department

Fort Saint George

Sir,

I have the honor to state, for the
information of His Excellency the Governor
in Council, in continuation of my report on
Cocanada, that since writing that report

I have received a letter from Major Beatty,
District Engineer, in which he states that
an Assistant Engineer has been appointed
to make over the plant at Cocanada to
the Master Attendant, by which action
the portion of my report bearing on
that subject has been rendered unnecessary,

and

and I respectfully beg that it may be
canceled I am in hopes that the new
dredge "Albuquerque" will, during the
Cochin winter season, be able to go round
to Cocanada, and make herself useful
there, if necessary. As regards the Cochin
work, I cannot find any mention made of
punts or barges for her use. The papers in my
Department merely describe the vessel herself,
and I have not heard of any preparation
for her at Cochin or elsewhere. If this
has been overlooked, it might be advisable
to take advantage of the present fine weather
to send four punts round from Cocanada,
or have an estimate called for at once for
building four punts or barges at Cochin,
which ever plan is recommended for
economy.

2 If the Marine works at that port
is, as I suppose, to be made over to the
Marine Department, I ought to be on
the look out for an efficient commander
for the Albuquerque, for no doubt her

12
her present crew are only put on board
for the voyage. As she is an expensive
vessel, and her duties are very comprehensive,
she ought to be placed in careful hands.
The Establishment for such a vessel
would change greatly with the nature
of the duties, but a Commander and
Engineer must be attached to her perma-
nently, and be in readiness to take charge,
when the contract with the builder expires.

I have the honor to be

Sir

Your most obdt servt

W Taylor
Master Attendant
Administrative Dept

No 3294 Mr d
Pro: of the Madras Govt

Under date 17 Nov 1875
Read the following

Letter from the Madras Assistant
No 6234 of 28th Septo to No 6268 of 29th
September 1875. referred to the
Public Works Department for
Remarks.

From the Superintending (No 1799 of 11 Septo.

It is remarked
with reference to the
latter part of para
2 of Captⁿ Searles
letter, that the power
of deepening the course
of the Cocomada River
by extending the
Southern Quarries
or Reclamation parallel
to,

20.
23-24/59 135-26-27 (Mannu & Co)
23-24/73 383-384
23-24/75 52-53.
23-24/75 109-110.
23-24/75 346-347.
23-24/75 348-349
23-24/75 272-273
23-24/75 557-558
23-24/75 126-127.

12-16a

No 627.

Referred to the Public Works Department
for remarks
S. Mannu

Offg Chief Secretary

To the Public Works Department
with sent. Walker's Memo.
1/11/75.

Received (1875) 29
from (1875) 29
No: 704
The Ag. Water Attendant
Administrative Department
29/10/75
The Chief Secy to Govt
Warrior Department
Fort Saint George

Dated 29, September 1875
Recd. No. 6268
Request to cancel that
portion of the report on
Cocomada about the
fer of the plant at Cocomada
to the Marine Dept. - Supp
A fine order for the
of 4 barges at Cocomada
a Captⁿ and Supr the
Remanently attached to
the two bridges "Allagun
qua"
C.O. No 3294. 14. 11. 75

do, and to the Civil & District of the Western,
 is one which was
 recommended by the
 Harbour Engineer
 Wm. Robertson, at
 page 43 of his Report.
 Its completion has
 already been initiated
 on the 12th of
 5th May, and the
 District Engineer
 Goddard will be
 required to report
 annually on the pro-
 gress made by the
 Master Attendant
 of Canada in carry-
 ing out the revised
 estimate of \$40,000.
 sanctioned in C O
 No 2359 of 16th August 1875.

up to end of 1874/75 Rs 18008
 In 1875/76 1370
 19378

It is observed that
 the total outlay
 by the Public Works
 Officers has been
 Rs 19,378; that Rs
 8630 of the current
 years allotment is
 available; and that
 an allotment of
 Rs 10,000 has been
 made in the Budget
 of 1876-77, from
 Post Funds; to which
 the charge is clearly
 debitable. It is
 possible that a
 mistake has been
 made in not pro-
 viding same break
 in the continuity

to the Regiment
to facilitate the
drainage of the
space behind; and
the District Engineer
will consider whether
the Redoubt should
not be supplement-
ed by some provi-
sion for bridging
such gaps, if they
are found necessary.
They may be fur-
nished with narrow
temporary crossings
meanwhile; or be
sloped and paved.
It is too late now to
substitute

15
substitute the steamer
"Fred & Mary" for the
"Frank & Ada". The
latter has already
been long at the ser-
vice of the Marine
Department for the
Master Attendant's
visits to Nagapattam
and examination of
its Harbour. The
survey of Coconada
Bay has been en-
tirely carried out
in her: and she
leaves by G.O. No.
1271 of 5th May for-
mally transferred
for the dredging
service.

specifications for which
Capt. Saylor's Re-
port of 23rd March
specially selected
her. It is observed
that in the same
Report he wrote
most disparagingly
of the "Fred & May"
with reference to
her fitness for ma-
rine purposes; re-
garding which
he was doubtless
then misinformed.
Capt. Saylor will
now be requested
to state whether he
can utilize the
"Fred"

15
"Fred & May", in
addition to the
"Frank & Ada" if
not, the former
vessel will be trans-
ferred to the Irriga-
tion Department
as requested in the
Dist Engineer's letter
recorded with G.O.
No 1982 of 12th July.
Since writing his
letter of 28th Sept^r
Capt. Saylor has
selected the District
Engineer's Plan and
estimate of Rs. 6,600
for the new high dam
at Vakkalapudi, which
has accordingly been

Sanctioned in
G.O. No 3103 of 2nd *in the name*
Nov 1875. His suggestion
that it should su-
percede the con-
struction of the
new Light House
on Hope Islands,
recommended by
W.^m Robertson,
must be referred
for Orders of the
Government of India,
as an Imperial
question.

The District
Engineer's Plan and
Estimate of Rs 8500
for a Landing and
Shipping

Shipping Quay
at Coconada were
sanctioned in the
Home Department
Order No 351 of
11th October 1875

Nothing is known
in the Public Works
Department regarding
the "Albuquerque"
which was ordered
for Marine Works
at Cochin. There
are no Public Works
in operation or
being planned
at that Harbour,
in conformity with
G.O. No 27 of
7th January 1875

Received on Capt.
Taylor's Report.
Ann.

~~Received on Capt. P. E.~~
~~Received on Capt. P. E.~~

W. H. G. G. G.
10:30 P.M.

Marine Dept - 7
Master Attendant in Dept 16 3 with one
W. E. Goddard 6 Plan
Controller 15
Ch. Engr for Eng 5

Rep 27-11-75

5995
7040

Govt. of Madras.
PUBLIC WORKS.

To

Marine Dept

Dated

Issued

Recd

Encl

G. O. 17th Nov 1870, No. 3291

No. 416-417

Southern Groyne at Cocanada.

Passing orders on the papers
relative to the completion of
the — and the transfer
of plant to the Marine Dept