

*Proceedings of the Madras Government, Public Works Department,
2nd September 1874.*

Read the following papers :—

No. 24. From Major J. O. HASTED, R.E., District Engineer, Kistna, to Lieutenant-Colonel JOHN MULLINS, R.E., Chief Engineer for Irrigation, dated Masulipatam, 28th March 1874, No. 138.

I HAVE the honor, with reference to G. O., No. 1,393, dated 19th May 1873, to forward herewith plans and estimates as follows :—

	Plans and Estimates.	
1 Inspecting Engineer's letter.		
*1 Plan of double Range Office, 5th and 6th.		
*1 Do. of Dugerala Range Office, 5th and 6th.		
*1 Do. of Baputla Range Office.		
*1 Estimate of double Range Office, 5th and 6th.		
*1 Do. of Dugerala Range Office.		
*1 Do. of Baputla do.		
7 Return requested when sanctioned.		
• In three separate covers.		
	Range Office at Bez-	
	wadah	1 1
	Range Office at Duge-	
	rala	1 1
	Range Office at Baputla	1 1

2. Plan and estimate for District Engineer's house, referred to in above Government Order, was forwarded to the Inspecting Engineer for Civil and Military Buildings on the 13th September 1873, No. 14, and has not since been heard of. Plans and estimates for Overseers' offices were also forwarded to the same Officer, and estimate for constructing two Range Offices at Bezwadah; these were returned with a letter, No. 1,591, dated 1st December 1873, copy of which I enclose. I have revised the plan for the two Range Offices, and it has occurred to me that as the cost of a Delta Range Office is included it should be sent to you, as the construction of buildings in the delta is to a great extent a question of funds, and it is necessary that the wants most urgently felt should be provided for first.

3. I should observe that the cost of all the buildings required is very considerably in excess of the sums which I at first stated they could probably be built for. In making out plans I found it was necessary, in order to provide buildings that would be habitable in the hot weather that prevails here for some months, to make them larger and better than I at first proposed, and I do not think the buildings as now designed can be considered extravagant.

4. The principal requirement in the district is a house for the District Engineer at Bezwadah. I am anxious to be able to reside there, but the only accommodation being one room about 15 feet square with a bath-room, I can hardly make a permanent residence there; as the plan has been submitted so long, I trust that sanction will soon be given to the work.

5. The next requirement is a Range Office at Bezwadah. The building which at present accommodates the 5th and 6th Range Offices may be allowed to stand for one more Irrigation season, but next working season I hope to have the main canal Eastern Delta completed, and the building must be pulled down; so long as I keep the District office at Masulipatam, accommodation could be found in the District office in the Workshop for the Range Offices, but after the District office comes to Bezwadah, there is no room available for the Range Offices.

6. After this, comes a Range Office at Dugerala. The Range Officer at present accommodates the office in a very small thatched building with mud walls attached to the shed he lives in, both buildings are his own private property, and he receives no rent from Government for the accommodation. The

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5. The next requirement is a Range Office at Bezwadah. The building which at present accommodates the 5th and 6th Range Offices may be allowed to stand for one more Irrigation season,* but next working season I hope to have the main canal Eastern Delta completed, and the building must be pulled down; so long as I keep the District office at Masulipatam, accommodation could be found in the District office in the Workshop for the Range Offices, but after the District office comes to Bezwadah, there is no room available for the Range Offices.

6. After this, comes a Range Office at Dugerala. The Range Officer at present accommodates the office in a very small thatched building with mud walls attached to the shed he lives in, both buildings are his own private property, and he receives no rent from Government for the accommodation. The

building is quite unfit for an office, and the records are liable at any time to destruction.

7. Houses for the Range Officers at Bezwadah and Dugerala are next required. The building inhabited by the Bezwadah Range Officer is now unsafe and must be pulled down next year when the canal is widened, and the shed belonging to the Range Officer at Dugerala is hardly fit for occupation as a residence, as you may have noticed.

8. The last requirement of the delta is a Range Office at Bapatla. The office is at present kept in the verandah of the public bungalow, part of which building is rented by the Range Officer from the Local Fund Board. When you visited the district, you raised the question whether Bapatla was the fittest head-quarters for the Range; without entering into this subject, I would observe that wherever the head-quarters is fixed an office will be required, as the building formerly used at Chebrole by the office is quite unfit for the purpose.

9. Setting aside the District Engineer's residence, the buildings required in the Delta are—

1. Range Office at Bezwadah.
2. Do. at Dugerala.
3. Residence for Range Officer at Bezwadah.
4. Do. do. at Dugerala.
5. Range Office at Bapatla.

10. For the 1st, revised plan and estimate is herewith sent.

• And estimate enclosed.

For the 2nd, the plan* proposed for Bapatla may be adopted.

For the 3rd, plan and estimate has been prepared and will be forwarded.

To Inspecting Engineer, No. 30, of 2nd January 1874. For the 4th, plan and estimate already sent.

For the 5th, plan and estimate herewith sent.

† 1874-75.

11. If funds can only be provided for one or two buildings this year,† I

should recommend that the Range Office at Bezwadah and Range Officer's residence there should first receive an allotment, as the present buildings must be removed this time next year. If more funds are forthcoming, the estimates should be sanctioned in the order above stated.

12. As regards site plans, both the Range Officer's house and office at Bezwadah must be located between the river and canal, no other ground is available. The Range Officer's house and office at Dugerala should be, I think, on the side of the canal, the bank being lowered for the purpose. The ground attached to the house would be the same as now rented by the Range Officer for Rupees 5 per annum. Cost at 20 years' purchase, Rupees 100. No other compensation is required for land. The Range Office if built at Bapatla would be situated in part of the land given over to this Department as a nursery garden.

13. The estimates for Overseers' offices have been approved by the Inspecting Engineer for Buildings, but the construction of these buildings I would postpone indefinitely, where a Range Office has to be built and there is no accommodation in the station for an Overseer's office, it is as well, I think, to add a small room for the Overseer; but in outstations I do not think buildings are much

required or would be much used. An Overseer has seldom to halt for more than a day, and the whole of his office papers can be stowed away in one desk.

14. The Range Office buildings proposed at Bezwadah will accommodate both the 5th and 6th Range Offices, the former of which does not belong in any way to the delta; half of this building only appertains to the delta.

No. 369.

No. 25. Note by the Chief Engineer for Irrigation.

With his letter, No. 138, of the 28th March last, the District Engineer has transmitted plans and estimates for a double Range Office at Bezwadah to accommodate the—

	RS.
Eastern Delta and Nundigama Range Offices	7,350
Western Delta Range Office and Sub-divisional Office at Dugerala ...	5,900
Bapatla Sub-divisional Office	4,300

2. It will be well to examine first the extent of accommodation provided in each case—

1st.—At Bezwadah.

The general arrangements are good, one building accommodating both offices, while keeping them quite distinct. Each office has—

Range Officer's room	16×12 = 192
Accountant's or Clerk's do.	20×16 = 320
Draughtsman	20×16 = 320
Square feet	832

For two Offices, Total do. ... 1,664

It seems very improbable that both offices should require exactly the same accommodation, and probably the separate Draughtsman's room for the Nundigama Range might be dispensed with. A width of 12 feet for a Range Officer's room is too small in any case, and for a Delta Range Officer much more space is needed. The following modifications might therefore be made, the two central rooms being made to appertain to the Delta Range Office.

Delta Range Office—

Range Officer's room	20×16 = 320
Drawing Office	do. = 320
Clerk's do.	do. = 320
	960

Nundigama Range Office—

Range Officer's room	16×16 = 256
Clerk's and Draughtsman's Office	28×16 = 448
	704

Total square feet ... 1,664

The area occupied will be the same, and the cost will be slightly less.

The site selected, which is reported to be the only one available, is the strip of land between the main canal and the river. Here there is a great deal of made soil, and it will be necessary to fix the exact site and to ascertain exactly what foundations will be required. A very large and unexpected addition to the cost might result from commencing to build before settling this matter; 16 to 24 trial pits will suffice, and the cost will be perhaps 5 Rupees.

The sum named for these offices is moderate, and if the foundations, as designed, be proved sufficient, the estimate may be sanctioned. The widening of the canal will shortly clear away the building at present used for an office and the Delta Range Officer's bungalow as well, and it is requisite therefore that the new accommodation for the former should be provided as soon as possible. A plan showing the proposed arrangements will be found with that submitted by the District Engineer.

2nd.—Western Delta Range Office at or near Dugerala. Estimate Rs. 5,900. Dugerala, where the Range Officer has for many years resided in considerable discomfort, is very conveniently situated as regards the works, and, during a recent visit to the delta, a better site in the neighbourhood was searched for, but did not seem to be obtainable. It might nevertheless perhaps be worth while to see again whether a better ventilated situation cannot be found somewhere between the head of the Bank canal and Dugerala.

The design of the office submitted does not seem to be convenient, and probably the plan of the Bezwadah office, omitting the room 28×16 , would provide the accommodation needed, and not be more expensive. The total area of the rooms in the one case would be $1,372\frac{1}{2}$, and in the other $1,408$ square feet. The exact site and aspect of the building having to be determined, and the provision for foundations specially considered with reference to the former, while the latter may render it practicable to omit a part of the verandah, the District Engineer may with advantage be instructed to reconsider the subject and to transmit a revised plan and estimate with block plan of site. It is of course quite practicable to carry on Range work satisfactorily at present, for were they removed to the latter, the accommodation would be insufficient.

3rd.—Bapatla Sub-divisional Office. Estimate Rupees 4,300. The first question to be considered is whether it is advisable to construct any permanent public buildings at this place. In G. O., No. 1,393 of the 19th May 1873, the suggestion of the District Engineer to locate one Sub-divisional Officer here was approved on the ground that there was accommodation for him in the old public bungalow, and as a temporary arrangement it did not appear to me that any objection thereto need be made. I do not consider, however, that this place is at all suited for the permanent head-quarters of one of the Delta Officers. It is a very out-of-the-way place; it is not situated upon or even near any one of the canals: it is a very long way off from the regulating works, on the proper management of which the supply of the lands in the sub-division will depend, and altogether it possesses no one recommendation except the fact that the public bungalow or a part of it is available as a residence. Were the Public Works Establishments in this delta organized in the way in which it could best be worked,

and which would be most likely to secure its proper management, each side of the Kistna would form a distinct executive charge, for the good order of which one Executive Engineer would be responsible, and under him two Assistant Engineers would be required. The very large estimates which will shortly be brought forward for sanction certainly render it, in my opinion, extremely desirable that the executive charges should be so arranged; and in that case, as in the Western Delta of the Godavery, I would place the head-quarters of the whole of the Engineering Establishment of this Western Delta in one place, as near the head as a suitable site could be found; because then the entire water regulation would be under competent supervision by those directly responsible for its proper management, while any part of each sub-division which required the presence of Officer or Officers concerned would be most easily reached, and every facility would be afforded for efficient management. The division of this section would then be by a north and south line, probably at the Nizamapatam canal, which divides it tolerably equally; whereas now it is by an east and west line, which is not, I think, adapted to the circumstances. There are in prospect fifteen or perhaps twenty years of steady hard work with probably an outlay of, on the average, 3 lakhs yearly on extensions and improvements, and 1 to $1\frac{1}{2}$ lakhs on repairs, and it would be perhaps difficult to explain clearly how great a difference it will be likely to make in results if really good arrangements be introduced before the commencement of those large operations, and then consistently maintained. If, however, the present system of two independent Ranges is to be continued, I think the Southern Sub-division should have its head-quarters on the Nizamapatam canal near Sandole.

In the design for an office the accommodation provided is as follows:—

Range Office room	...	...	...	16×12	= 192	
Clerks' rooms and records	...	...	...	$2 \times 20 \times 16$	= 640	832
Overseer's Office	...	...	...	16×12	= 192	
Store-room	...	...	...	$\{ 13 \times 6\frac{1}{2} \}$	= 111	
				$\{ 4\frac{1}{2} \times 6\frac{1}{2} \}$	= 303	

and I see nothing in this design needing alteration except the size of the Range Officer's room, which is much too small for the kind of work, much of which will be connected with large surveys and plans, on which he will be engaged. I would therefore make his room 20×16 , and put the clerks and records into one room instead of two, making this one room 30×16 . The space would then be 800 square feet against the 832 square feet above shown.

3. It is desirable to notice that as much record space as possible should be provided in the walls of these offices. A great deal of room can be saved and some expense for furniture also, if recesses be made in the walls and wooden bricks inserted for fixing doors, which should generally be glazed, and for fastening the bars which are to support the shelves.

4. With regard to the residences for the Public Works Officers of the deltas, it is understood that Major Hasted is not desirous now to have a residence built for him by Government at Bezwada, because the charge of 15 per cent. on the required outlay would make the rent considerably more than he can afford to pay. The design and estimate for the residence did not pass through this

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2nd September 1874.*

office, and so I do not know what the accommodation proposed to be provided was, but I do not suppose that a residence for the District Engineer could be built for less than Rupees 8,000, and the rent would then be 100 Rupees a month; whereas Rupees 75 would, I think, be the maximum that a District Engineer would be likely to be willing to give, and probably Rupees 60 would be as much as would be gladly given were there any option in the matter. However, as regards the residences of officers located at Bezwadah, it seems probable that, when once the arrangements shall have been finally determined upon, private houses will be erected. At the outstations there is of course not much probability of permanent dwelling houses being constructed by Native or other Capitalists, but when the Government shall have sanctioned the construction of the permanent offices, there will be not much risk in Range Officers providing themselves with such accommodation as they may think necessary for their own convenience, in the immediate neighbourhood of their offices. They would probably prefer in most cases doing so to paying 15 per cent. on the cost of a permanent residence, and the requirements of successive officers are apt to vary so considerably that it becomes very difficult to design a house which would be likely to be generally acceptable. I propose therefore that the idea of constructing residences with Public money be finally abandoned.

5. The District Engineer's head-quarters are, it has already been determined, to be at Bezwadah, which is the only proper place for them, but as a temporary measure his office is now at Masulipatam. I think this latter arrangement should be allowed to continue only until the 31st December next at latest.

OOTACAMUND,
28th May 1874.

(Signed) JOHN MULLINS, Lieut.-Colonel, R.E.,
Chief Engineer for Irrigation.

No. 26.

ORDER THEREON, 2nd September 1874, No. 2,478.

CIVIL WORKS, No. 3.

His Excellency the Governor in Council sanctions the plans and estimates for offices for the 5th and 6th Ranges, the 1st Range and Sub-division, and the 2nd Range of the Kistna District, as sent in by the District Engineer and estimated to cost, respectively, Rupees 7,350, Rupees 5,900, and Rupees 4,300; and desires that provision for the first be made, if possible, in the current official year, as it is decided beyond doubt that Bezwadah must be the common head-quarters of the 5th and 6th Ranges. The other two estimates will be entered in the Provincial Budget of 1875-76, but the construction of the buildings deferred until it has been seen whether the Kistna Deltas shall be worked as single Ranges with Sub-divisions, as in the Godavery, or remain as they are; on which subject the Chief Engineer for Irrigation and Chief Engineer, Public Works Department, will report when the vacancies in the Junior Grades of the Engineer Establishment shall have been filled up.

2. The arrangement and dimensions of the rooms of the several offices seem to have been fixed after some correspondence between the District Engineer and Inspecting Engineer for Buildings, and need not be altered; but it will be

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optional with the District Engineer to reallocate the accommodation somewhat in the manner recommended by the Chief Engineer for Irrigation. Lieut.-Colonel Mullins' hints and suggestions as to ascertaining precisely the depths of foundations required will be attended to; and those as to recessing the walls for storage of current records will be carried out in construction.

3. The Government are of opinion that taking all the circumstances into consideration, it will not be advisable that the Delta Public Works Officers' residences should be constructed with Public money. It is very doubtful whether such an arrangement would be generally acceptable to the officers themselves, taking the rent which would have to be paid into account; and on the whole therefore it will be best to leave it to these officers to make their own arrangements.

(True Extract.)

Colonel, R.E.,

Secretary to Government.

To the Chief Engineer for Irrigation.
" District Engineer, Kistna.
" Officiating Controller of Public Works Accounts.

Exd. T. O'Connor.

Spare Copies

For the Office of the Chief Engineer for Irrigation - 1000

No. 369.

Report by the Chief Engineer for Irrigation

With his letter No. 138 of the 20th March last, the D. Engineer has transmitted Plans and estimates for a double Range Office at Bozwada to accommodate the Eastern Bellā and

Western Gundigama Range Offices. Rs. 7350
 Eastern Bellā Range Office and Subdivisional Office at Dugwala. " 5900
 Bahutla Subdivisional Office. " 4300

2. It will be well to examine first the extent of accommodation provided in each case

1st at Bozwada
 The general arrangements are good, one building accommodating both Offices, while keeping them quite distinct. Each Office has

Range Officer's room 16x12	=	192
Accountant's or clerk's do 20x16	=	320
Dr. aug. to main 20x16	=	320
	Sq. feet	832
For two Offices total do		1664

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It seems very improbable that both offices should require exactly the same accommodation, and probably the separate Draughtsmen's rooms for the Nundigama Range might be dispensed with. A width of 12 feet for a Range Officer's room is too small in any case, and for a Bellā Range Officer much more space is needed. The following modifications might therefore be made, the two central rooms being made to appertain to the Bellā Range Officer.

Bellā Range Officer

Range Officer's room	20x16 =	320
Drawing Office	do =	320
Clerks do	do =	320
		<u>960</u>

Nundigama Range Office

Range Officer's room	16x16 =	256
Clerks & Draughtsmen's Office	20x16 =	448
		<u>704</u>

Total Sq. feet 1664

The area occupied will be the same and the cost will be slightly less. The site selected, which is reported to be the only one available is the strip of land between the main canal and the river. Here there is a great deal of made soil, and it will be necessary to fix the exact site and to ascertain exactly what foundations will be required. A very large and unexpected addition to the cost might result from commencing to build before settling this matter. 16 to 24 trial pits will suffice, and the cost will be perhaps 5 Rupees.

The sum named for these offices is moderate, and if the foundations as designed be proved sufficient, the estimate may be sanctioned. The widening of the canal will shortly clear away the building at

at present used for an office and the
Bella Range Officer's bungalow as well,
and it is requisite therefore that the
new accommodation for the former
should be provided as soon as possible.
A plan showing the proposed arrange-
ments will be found with that submitted
by the Lt. Engineer.

2^d Station Bella Range Office
at or near Brugarala: Peti. No. 5900.
Brugarala where the Range Officer had
for many years resided in consid-
erable discomfort, is very conveniently
situated as regards the works, and
during a recent visit to the Bella
a better site in the neighborhood was
searched for but did not seem to be
obtainable. It might nevertheless
perhaps.

perhaps be worthwhile to see again whether
a better ventilated situation cannot be
found somewhere between the head of
the Bank Canal and Brugarala.
The design of the office submitted does
not seem to be convenient; and probably
the plan of the Bozwada Office, omitting
the rooms 20x16, would provide the accom-
modation needed and not be more ex-
pensive. The total area of the rooms in
the one case would be 1372½ and in the
other 1400 sq. feet. The exact site and
aspect of the building having to be deter-
mined, and the provision for founda-
tions specially considered with reference
to the former, while the latter may per-
-mit it practicable to omit a part of
the verandah, the Lt. Engineer may
with advantage be instructed to re-
-consider

reconsider the subject and to transmit
a revised plan and estimate with
block plan of site. It is of course
quite impracticable to carry on Range
work satisfactorily at present, for
were the Range Officer's own hut,
as well as the shed at present used
as an office, entirely devoted to
the latter, the accommodation
would be insufficient.

3: Bapatla Subdivisional Office -
estimate Rs. 4,300.

The first question to be considered
is whether it is advisable to construct
any permanent Public buildings
at this place. In G. No. 1393 of the

19th May 1873 the suggestion of the
Sd. Engineer to locate no Subdivisional
Office here was approved on the ground
that there was accommodation for
him in the old public bungalow,
and as a temporary arrangement
it did not appear to me that any
objection thereto need be made. I do
not consider however that this place
is at all suited for the permanent
head quarters of one of the Melta
officers. It is a very out of the way
place; it is not situated upon
or even near any one of the
canals: it is a very long way
off.

from the regulating works
on the proper management
of which the supply of
the lands in the subdivision
will depend, and altogether
it possesses no one recommen-
dation except the fact that
the public Bungalow or a
part of it is available as a
residence

residence. Were the Public Works establish-
ments in the Delta organized in the way in
which it could best be worked, and which
would be most likely to secure its proper
management, each side of the Kistna would
form a distinct Executive charge, for the
good order of which one Executive Engineer
would be responsible, and under him
two Assistant Engineers would be required.
The very large estimates which will
shortly be brought forward for sanction
certainly render it in my opinion ex-
tremely desirable that the Executive
charges should be so arranged, and in that
case, as in the Western Delta of the
Godavari, I would place the headquarters
of the whole of the Engineering establishment
of this Western Delta in one place, as head-
quarters, as a suitable site could be found;
because then the entire water regulation
would be under competent supervision
by those directly responsible for its proper
management, while any part of each

sub division which required the presence of officer or officers concerned would be most easily reached, and every facility would be afforded for efficient management. The division of this section would then be by a north and south line - probably at the hizamapataun Canal, which divides it tolerably equally; whereas now it is by an east and west line, which is not I think adapted to the circumstances. There are in prospect 15 or perhaps 20 years of steady hard work with probably an outlay of, on the average, 3 lakhs yearly on extensions and improvements, and 1 to 1½ lakhs on repairs, and it would be perhaps difficult to explain clearly how great a difference it will be likely to make in results if really good arrangements be introduced before the commencement of those large operations, and then consistently maintained. If however the present system of two independent Ranges is to be continued, I think the Southern sub division

should have its headquarters on the hizamapataun Canal near Sandole. In the design for an office the accommodation provided is as follows.

Range office room	$16 \times 12 =$	192
Clerks rooms & records	$2 \times 20 \times 16 =$	640 832
Overseers office	$16 \times 12 =$	192
Store room	$13 \times 6\frac{1}{4}$	111
	$4\frac{1}{2} \times 6\frac{1}{4}$	
		303

And seeing nothing in this design needing alteration except the size of the Range Officer's room, which is much too small for the kind of work, much of which will be connected with large surveys and plans on which he will be engaged. I would therefore make his room 20×16 and put the clerks and records into one room instead of two, making this one room 30×16 . The space would then be 800 square feet against the 832 square feet above shown.

3. It is desirable to notice that as much record space as possible should

be provided in the walls of these offices. A great deal of room can be saved and some expense for furniture also, if necessary, be made in the walls and wooden bricks inserted for fixing doors, which should generally be glazed, and for fastening the bars which are to support the shelves.

4. With regard to the residences for the ^{Public Works} ~~Revenue~~ Officers of the Deltas, it is understood that Major Hasted is not desirous how to have a residence built for him by Government at Bezwarda; he claims the charge of 15 per cent. on the required outlay would make the rent considerably more than he can afford to pay. The design and estimate for the residence did not pass through this office, and so I do not know what the accommodation proposed to be provided was, but I do not suppose that a residence for the District Engineer could

be

be built for less than Rs 8000, and the rent would then be 100 Rupees a month, whereas 75 Rupees would, I think, be the maximum that a District Engineer would be likely to be willing to give, and probably 60 Rupees would be a much better amount. He is glad to give. There are many options in the matter. ~~However~~ As regards the residence of Officers located at Bezwarda, it seems probable that, when once the arrangements shall have been finally determined upon, private houses will be erected. At the present time there is of course not much probability of permanent dwelling houses being constructed by native or other ~~private~~ Capitalists, but when the Government shall have sanctioned the construction of the permanent offices, there will be not much risk in Range officers providing themselves with such accommodation.

as they may think necessary for their
own convenience, in the immediate
neighbourhood of their offices. They
would probably prefer in most cases
dwelling to lodging & therefore on the
cost of accommodation, and
the requirements of successive officers
are apt to vary so considerably that
it becomes very difficult to design a
house which would be likely to be gene-
rally acceptable. I propose therefore
that the idea of constructing residences
with public money be finally abandoned.
5. and the District Engineer's head
quarters are, it has already been
determined, to be at Beydarsah,
which is the only proper place for them,
but as a temporary measure his
office is now at Masulipatam.
I think this latter arrangement should
be

be allowed to continue only until
the 31st December next at latest -
1872.

William Lintin Lieut. Col. R.E.
Chief Eng^r for Irrigation

Ordered
28th May 1871 -

as above

To
The Secretary to Government
P. W. Dept.

220

Public Works Department
Proceedings of the Madras Government
From The Engineer
The District (H. Co. to 138 dated
28 March 1874)
No. Chief Eng. for New H. Co. to - dated 28
May 1874.

From

The Chief Engineer for
Irrigation

Dated 28th May 1874
Received 29th May 1874

Enclos: 8.

G.O. No: 2478: 2-9-74
Submitting
a letter from the
District Engr. District
with plans & estimates
for Range of fields
in the district.

Oct 25

Public Works Department
Proceedings of the Madras Government
Read the following
From The Engineer
The District (H. Co. to 138 dated
28 March 1874)
No. Chief Eng. for New H. Co. to - dated 28
May 1874.

In his Memorandum
on this subject the Chief
Engineer for Irrigation
has had in view rather
his own ideas as to the

best theoretical ar-
rangement of the

Ranges of the District
District than the

existing arrangement
sanctioned in G.O. No. 1466

This point has been decided
before public money is
spent - When considering
very absolutely - I am
inclined to agree with the
Ch. Engr. & District Engr. as to the
disposition of the money

I should like to know of 23 May 1873; which
the amount of the was determined on
at Provincial level.

as practically feasible
 adapted to the Indian Civil Buildings
 system of moderate
 Executive changes, and made in the Budget
 to the strength of the Salubry the current year
 Govt Co. Department fixed. There can be no
 by Ld. 2190 of 14th Septem. Draft as to Raywade
 Dec 1872. By that order I would sanction the
 arrangement the old much, if we have funds
 Eastern Delta Range leaving the others for
 was divided into future consideration
 I. or the Bezwarah Range with
 Head Quarters at Bezwarah.
 II. or the Masulipatam Range with
 Head Quarters at Masulipatam,
 and the Western Delta into
 I. or the Rapilly Range with Head
 Quarters at Duggeralla.
 II. or the Bapulla Range, with
 Head Quarters at Bapulla.

Lieut.

Lieut. J. D. Mullins
 proposals therefore as
 regards the transfer
 of the Head Quarters
 of Co. II Range from
 Bapulla to Sandole are
 inconsistent with the
 existing constitution
 of the Range, which
 consists of the Bapulla
 Salook and Lammamoor
 Channel to its head
 with its Head Works.
 It would manifestly
 therefore be wrong
 to place its Head Quar-
 ters in another Salook
 and on the Masulipatam
 Channel which is not
 in the Range.

It seems that all
 an aged as to Raywade
 but that, except the
 as required regarding
 orders, ought not to
 be passed until the
 be decided whether
 a Lieut. Mullins
 proposals for an
 independent of the
 work in the Korta
 should be adopted.
 The position is of a
 practical importance, and
 the large amount of

Bapulla

Bapulla must there-

fore stand for Head

Quarters, unless the

District Engineer

has any other place

to propose.

3. With these remarks

His Excellency the

Governor in Council

sanctions the plan

and Estimates as sent

in by the District

Engineer viz:

1. Office at Belgaum for the

5th (Kundigam) and 6th (Belgaum) Ranges

2. Office at Rapilly for the

1st (Rapilly) Range and sub-division

3. Office at Bapulla for the

2nd (Bapulla Range)

and

Chief Mullins in com-
munications with

public utility work

the great interest

in the

that Col.

has done

for the

adoption of his plan,

if it is feasible. Mr.

it is feasible, with

the

staff of the

Rs 7,000

Rs 4,300

and orders provision for

the same to be made in

the Provincial Budget

of 1875-76, if funds

cannot be provided

for commencing them

in the current official

year.

The arrangement

and dimensions of the

rooms of the several

offices seem to have been

fixed after some con-

sultation between

the District Engineer

and Inspecting Engineer

for Building, and need

not be altered, but

it will be optional

as was agreed

of 1875-76, if funds

cannot be provided

for commencing them

in the current official

year.

The arrangement

and dimensions of the

rooms of the several

offices seem to have been

fixed after some con-

sultation between

the District Engineer

and Inspecting Engineer

I do not suppose that

such a distribution

of work in the Dept

was possible and

admit of the

arrangement proposed

by Mr. Mullins.

And this plan for Building, and need

not be altered, but

it will be optional

with the District En-
gineer to recall the
accommodation some-
what in the manner
recommended by the
Chief Engineer for
Irrigation. With
Col. Mullins' hints and
suggestions as to
ascertaining precisely
the depths of founda-
tions required will
be attended to; and
those as to recessing
the walls for storage
of current records
will be carried out
in construction.

Emm

Jan 16 July

Chief Engineer in
consultation with the
Chief Engineer for
Irrigation. 1875

There can be no
doubt about sanding
the Reguadora & Irrigation
Range joint office
at Reguadora.

But I am satisfied
that with reference to what
is now before the Chief
Engineer for Irrigation,
the question of the best
way of administering
the station dollar should
be carefully reconsidered;
before Range Officer
with the concurrence of
leading Officer or others
to provide residence
at such stations as
Bapalla & Repalla are
constructed.

I think Col. Mullins
has shown excellent sense
for considering the territorial
disposition of work in
the Western Delta of
the Krishna District
and I entirely agree
with him that if possible
this Delta should, as
in Coimbatore, be under
one Executive Engineer
with assistants available
for general & special
employment in the system
of work, all having
one source at the head
quarters near Berhampore.
I think that the office
of the Executive head of
the Western Delta works
should be near the District
Office at Berhampore, say
at or near Dugra.

A very large sum
is to be spent on the
great

Office at Berhampore is
proposed

great system of Irrigation
and drainage for which
estimates are in course
of preparation. And I
have little doubt that
sooner or later it will
be necessary to place
the whole under one
responsible Executive.
I am therefore unwilling
to put down Public buildings
in so unsuitable & out of the way
place as for instance Bapatla.
Bapatla became accidentally
Sherman's - as there was
a bungalow there - the
station of the Rang. Officer,
but has no feature either
of amenity or convenience
for the execution of work
to recommend it.

I would defer for
the present the sanction
of the proposed Offices
at Bapatla & Repalle
and

and ask the Chief
Engineer for Irrigation
to elaborate his recommendation
more fully in communication
with the District Engineer
Major Hester for the
mature consideration

Government

277 MB

P. W. D.

Proceedings of the Madras Government,
Under date the

187 .

Read the following:—

See Recommendation for

His Excellency the
Governor in Council ap-
proves of the design for
the Packer Bellā and
Mundigam Range Offices
at Bozwadah, the estimated
cost of which is Rs. 7,350,
as somewhat modified
by the Chief Engineer for
Irrigation; as soon as the
exact site for the building
shall

shall have been fixed
and the nature of the
soil and consequently
the sufficiency or otherwise
of the foundations pro-
vided ascertained, the
estimate will be sanctioned.
Looking also to the neces-
sity for constructing this
Office as soon as possible
in consequence of the re-
moval of the present
Office by the widening
of the main Canal being
imminent, funds will
be provided under Provin-
cial

Hofmann's who have
considerable

Provincial to such extent
as may be practicable
for the immediate com-
mencement of the work.

2. The remarks of the
Chief Engineer for Irrigation
in connection with the pro-
posed Range Office in
the Western Delta of the
Kistna involve questions

These questions
were settled by
G.O. 2121011 of 27
April 1873 in which
it is decided that the
proposals of the
Chief Engineer
were inconsistent
with the rule on
which the P. W.
Dept. have been
organized -
relating to the organization
of the Public Works Estab-
lishments in the Delta
which cannot immedi-
ately be disposed of, and
must be determined
after that Officer shall
have

These young men
must be supplied
as I am sure of the
affection for the
Mission. The

3. *Asplenium* is in the
lowest level found
be near the ground when some
stratified, and the
stratified 2nd of the
level it is in the
stratified - The dis-
tinction between the
The Ch. bed is for the
the lower such as
less much to be
if they are more
of the stratum of
Virginia. How long

3. The Government are
of opinion that taking
all

all the circumstances
into consideration, it will
not be advisable that
the Delta P. W. Officers'
residences should be con-
structed with Public money.

It is very doubtful whether
such an arrangement
would be generally ac-
ceptable to the Officers.
themselves, taking the rent
which would have to be
paid into account; and
on the whole therefore
it will be best to leave
it to these Officers to make
their own arrangements.

This is a very important
point, and should be
considered carefully.

This was sent on
by G.O. 112189 of 19th
May -

Major H. H. H. H. H.
has been to see the
best means of
improving the
situation of the
Officers' residences.
He is now in the
process of making
arrangements for
the same.

4. His Excellency
considers it desirable that
the P. W. Engineer's head quar-
ters and Office should
be permanently located
at Bozwadak as soon
as possible; and, as it has
now been decided that a
residence will not be con-
structed by Government,
it is only necessary to leave
Major Hasted time to make
other arrangements, which
it is hoped may be settled
by the end of the year;
and accordingly, from the
1st of January 1875 at
latest,

Latest the office should
be reinstated in the
building provided for
it at Bizwadah.

by 30/5/74

31748

Public Works Department
Proceedings of the Madras Government
Read the following
From
The Dy. District (H. C. 138 dated
" Chief Engineer (H. C. 369 dated 28th March 1874)
May 1874)
2478

His Excellency the
Governor-in-Council
sanctions the Plans
and Estimates for office
for the 5th and 6th Ranges,
the 1st Range and Sub
Division, and the 2nd
Range of the Kistnah
District, as sent in
by the District Engineer
and estimated to cost
respectively Rs 4300,
Rs 5900, and Rs 4300;
and

MD
6/10

1/6

181
6/10

and desired that provi-
-sion for the first he
made, if possible, in
the current official
year, as it is decided
beyond doubt that
Belwada must be the
common Head Quarters
of the 5th and 6th Ranges.
The other two estimates
will be entered in the
Provincial Budget
of 1875-76, but the con-
-struction of the Binto-
-ing deferred until
it has been seen whether
the Kistnah Deltas shall
be worked as single
Ranges with Sub Divi-
-sions, as in the Godavary.

or remain as they are;
on which subject the
Chief Engineer for
Irrigation and Chief
Engineer, S. H. Deane
will report when the
vacancies in the Junior
Grades of the Engineer
Establishment shall
have been filled up.
2. The arrangement
and dimensions of the
rooms of the several
offices seem to have been
fixed after some cor-
-respondence between
the District Engineer
and Inspecting Engineer
for Buildings, and need
not be altered; but it

it will be optional
with the District En-
-gineer to recast the
accommodation some-
what in the manner
recommended by the Chief
Engineer for Irrigation.
Lieut. M. Mullins' hints
and suggestions as to
ascertaining precisely
the depths of foundations
required will be attended
to; and those as to re-
-cessing the walls for
storage of current
records will be car-
-ried out in construction.

3. The Government are
of opinion that taking
all the circumstances
into

15
consideration, it will
not be advisable that
the Delta D.R. officers' residences should be
constructed with Public
money. It is very doubtful
whether such an arrange-
-ment would be
generally acceptable
to the officers themselves,
taking the rent which
would have to be paid
into account; and on
the whole therefore it
will be best to leave
it to these officers to
make their own
arrangements.

To the Chief Engr. for D.R. 1.
" S. Co. Mullins with six Engrs. 1.
" Controller with 3 Engrs. of S. Co. Estimator 1.
S. Co. Secy despt. 9/7/74.

G. W.

3174 A✓



Govt. of (1874) Madras.

PUBLIC WORKS.

To

The C. Superf. Engineer

Dated

Recd.

Encl. 2

G. O. 2 Sept. 1874 2478

Nos. 24-26.

Range Offices - Nicobar Is.

Estimates for certain Offices
sanctioned with remarks,
the construction of the Build-
ing deferred until it has
been ascertained seen whether
the Nicobar Islands shall be
worked as single Ranges
or sub divisions, as in the
Proclamation, or remain as they are,
on which subject the Chief
Supt. for S. & C. Chief Supt.
P.O. to report when necessary
the Junior Grades of the Engineer.

24-26

Recd 11/8/74

6th 6/8/74