M.R.O. 1—10,006—23-2-50.

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MADRAS RECORD OFFICE

Government of Madras

Public Works DEPARTMENT

G.O. No.	3621	Press
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Read the following papers:—

No 494. From Major J. BEATTY, R.E., District Engineer, Godavery, to Lieutenant-Colonel J. MULLINS, R.E., Chief Engineer for Irrigation, dated Dowlaishweram, 9th October 1874, No. 2,147.

As requested in your memorandum No. 704 of 11th ultimo, I have now the honor to report further on the repairs of the irrigation plant of the district, with reference to G. O., No. 2,271, of 17th August 1874.

1 Statement marked A.
1 Do. marked C.
1 Report by the Range Officer.
4 Estimates.
} Despatched in a separate cover.

2. On 23rd July last, I submitted one general list of the whole floating plant of the district, including Irrigation, Harbour, Upper Godavery Navigation, and Local Fund, and proposed an expenditure for the present year on the irrigation and harbour plant only, in ordinary and special repairs, amounting to Rupees 41,608, that being, it was believed, the utmost the workshops could undertake to carry out this year.

3. In now separating the plant into four lists, and revising the proposed expenditure with reference to the more exact information possessed of the state of the plant, I adhere to the same total* value of work to be done, but have reduced the share of it to be devoted to the irrigation plant and increased the demand for harbour plant.

* As nearly as practicable.

4. Some of the harbour punts long known to be in a very inefficient state, but which it was hoped might be made to work through another dredging season, have since been brought into the workshop, and on examination found to be so decayed that it would be unsafe to attempt using them further until extensive repairs have been done, and this is most urgent as the dredging of Cocanada bar cannot be carried on without them, and the traffic of the port would be seriously obstructed.

5. I have therefore altered the proposed expenditure as follows:—

	Proposal of 23rd July.		Now Proposed.	
	Ordinary.	Special.	Ordinary.	Special.
Irrigation	6,246	32,343	4,619	29,692
Harbour	1,950	1,069	1,450	7,276
Total ...	8,196	33,412	6,069	36,968
Grand Total ...	41,608		43,037	

6. In paragraph 2 of that order it is proposed to transfer the steamer *Prince*, the three deep boats Nos. 7, 8, 9, and the wooden flat of 5½ tons, marked U. G. in the District Engineer's list of 27th April 1874, to a separate

statement of Upper Godavery Navigation Plant. This however cannot fairly b done, as the steamer *Prince* is not suited to the Upper Godavery navigation, being too broad to pass through the locks, and the three deep boats were originally employed on the Upper Godavery irrigation works, they were irregularly transferred to the Lower Godavery two years since. They came down with stores, were retained for use on the delta works, and have ever since been working here. The wooden flat, carrying capacity 5½ tons, was regularly transferred in 1872, and is now working in the Western Delta.

Width of steamer, including paddle boxes, 43 feet; width of locks 30 feet.

7. As directed, the steamer *Godavery* and her steel barges, specially built for the river navigation, shall be shown in a separate list of Upper Godavery Navigation Plant, but, under the above explanation, I shall continue for the present entering the *Prince*, and the four Upper Godavery boats that came into our possession two years since, in the list of irrigation plant.

8. Again, as regards the steel barges, which will be required exclusively for the river navigation from 15th June to 15th November, these may be most useful to the anicut and delta works during the remaining seven months of the year, and if they are so employed it would be proper to charge half their maintenance to Irrigation. The total cost of maintaining each of the steel barges would be about 100 Rupees a year.

9. As stated in paragraph 2, the *Prince* cannot be used on the navigation of the Upper Godavery as an alternative vessel, and for this purpose it will be necessary, if Government determine to continue running the steamers on the river, to get down one of the other two steamers, *Wurdah* and *Wynegunga*, which were built expressly for the navigation. The *Wurdah* would be best, being the more easily worked.

10. The Irrigation floating plant is as follows:—

4 Steamers, *Thistle*, *Little Nell*, *Fawn*, and *Prince*.
6 Canal Dredges.
53 Punts fit for carriage of stone.
15 Punts suitable only for concrete, chunam, or silt.

I now send a fresh statement showing the sums asked for in my list of 23rd July 1874, for the present year, corrected according to the more exact information now possessed in regard to the state of the plant, and the expenditure proposed for next year to complete the special repairs and maintain the plant efficiently.

11. On receipt of your telegram* directing me to proceed with the repairs of the irrigation plant, the irrigation punts then in the workshops were put in hand at once, and ordinary and special repairs to the extent of 34,311 Rupees† can be carried out this year if funds be provided, but pending further instructions work will only be undertaken to the extent already in progress, viz., Rs. 21,790,‡ as it seems doubtful whether funds can be found this year to the full extent of

* Of 5th August.

† *Vide* paragraph 5.

‡ *Vide* Statement marked C.

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the repairs of both kinds now proposed. It seems doubtful whether the workshops, now that the year is so far advanced, could spend more than Rupees 43,037 on the two descriptions of plant, Irrigation and Harbour, say, Rupees 34,311 on Irrigation and Rupees 8,726 on Harbour.

12. The renumbering and measurement of the plant, as directed in paragraph 14 of Chief Engineer's memorandum, No. 184C of 26th February 1874, is being carried out, and the progress made up to date is shown in a separate statement marked B.

Statement B. will be forwarded in a few days.

13. With reference to the remarks in paragraph 5 of Government Order, I beg to explain that in the list, dated 27th April 1874, column 20 showed the actual average expenditure during the preceding three years on such of the plant as had been repaired from "Tools and Plant," as shown by the accounts; and was not intended to show what it was believed would in future be necessary to maintain the plant in a state of efficiency. This is now given* so far as it can be calculated. The repairs of the small dredge No. III. had cost more than the others in up-keep, because that dredge had been most used.

* *Vide* accompanying Statement marked B, column 9.

14. No further repairs were required in last year for canal dredge No. VI., as it had just been put in good order at an expense of Rupees 138, as shown in the printed list. That sum was the actual cost of up-keep for the year 1873-74, *vide* paragraph 6 of the Government Order.

15. Estimates for special repairs to thirteen punts only have yet been prepared, because it has not been possible to bring the others into the workshop and examine them, and without docking and thorough examination estimates must be a mere guess.

16. It is remarked in paragraph 8 of the Government Order that the cost of the special repairs to the punts are apparently very heavy as compared with their "original cost," but in regard to that "original cost," as I have already pointed out in paragraph 2 of my letter, No. 1,294, of 23rd July 1874, this office is unable to give the full value of the plant, but only so much of it as was incurred in this country for freight from England, fitting up, etc. The actual value was probably on the average about Rupees 6,387* a punt, and it has to be remembered that much of this plant has been working for many years without even ordinary repairs.

* This is the value of a harbour punt, an irrigation punt would cost, new, about Rupees 5,800.

17. I have, pending further instructions, retained No. 33 iron chunam punt in my list of irrigation plant; because, as shown in column 4 of the printed list of 27th April, it was purchased from the Upper Godavery in March 1871 for the irrigation work of the delta, and has been so used ever since.

18. The steel barges belonging to the steamers *Godavery*, *Wurda*, and *Wynegunga* were not entered either in the list of 27th April or in that of 23rd July, and these will now be shown in the separate list of Upper Godavery Navigation Plant.

19. The charge for a watchman employed on the steam dredge, kept in the Western Delta, No. 6, Rupees 78, should have been charged to the maintenance of that dredge. This is an annual charge.

20. The general result of the revision now made is that whereas Rs. 41,608 were asked for in the statement of 23rd July for this year, according to the accompanying revised statement work to the extent of Rupees 43,037 should be proceeded with if funds can be provided; and repairs to the extent of Rs. 21,790 have already been carried out, or are now in hand. To meet this expenditure up to this time Rupees 13,000* have been provided, and the balance, Rs. 21,311,* has yet to be allotted, or such portion of it as may be found practicable, to the extent at least of Rupees 8,790, to cover work already undertaken. In order to make my present demand as moderate as possible I have struck out the ordinary repairs previously proposed from all plant that is to receive special repair in. next official year.

* For irrigation only.

21. I send also a report from the officer in charge of the Eastern Delta Range, who justly observes that the charges proposed cannot be regarded as unreasonable, considering the great value of the plant that has to be maintained.

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29th December 1874.

A.

IRRIGATION FLOATING PLANT.

Statement showing the Number and Description of the Irrigation Floating Plant in the Godavery District, and Repairs proposed to each in the present and in next year.

General No.	Description.	Vessel's Number.	Value.	When last repaired.	Cost of last repair.	PROPOSED FOR THE PRESENT YEAR, 1874-75. Ordinary repairs.	PROPOSED FOR THE PRESENT YEAR, 1874-75. Special repairs.	PROPOSED FOR NEXT YEAR, 1875-76. Ordinary repairs.	PROPOSED FOR NEXT YEAR, 1875-76. Special repairs.	Remarks.
1	2	3	4	5	6	7	8	9	10	11
	Irrigation Plant.		Rs.		Rs.	Rs.	Rs.	Rs.	Rs.	
	Steamer *Prince* ...	...	33,000	.....	.....	980	.....	980	.....	
	Do. *Thistle*...	...	20,014	.....	.....	.....	2,817	450	.....	
	Do. *Little Nell*	...	16,456	1873-74	3,287	478	...	630	.....	
	Do. *Fawn* ...	...	1,800	1872-73	1,189	250	.....	390	.....	
	Canal dredge	...	26,373	1867-68	3,850	250	.....	425	.....	
	Do.	...	15,395	1873-74	...	315	.....	315	.....	
	Do.	...	30,437	1872-73	.....	425	.....	425	.....	
	Do.	...	30,437	1873-74	.....	425	.....	425	.....	
	Do.	...	31,097	1872-73	.....	425	.....	.....	2,500	
	Do.	...	2,812	1873-74	.....	425	.....	425	.....	
	Canal Punt	...	2,812	.....	.....	.....	.....	.....	*2,500	
	Do.	...	2,811	.....	.....	.....	† 541	50	.....	
	Do.	...	2,811	.....	.....	.....	‡2,690	50	.....	
	Do.	...	2,811	.....	.....	.....	†541	£0	.....	
	Do.	...	2,812	.....	.....	.....	.....	.....	*2,500	
	Do.	...	2,812	1873-74	1,785	.....	.....	50	.....	
	Do.	...	2,812	.....	.....	.....	‡2,533	50	.....	
	Do.	...	2,812	.....	.....	.....	†2,437	50	.....	
	Do.	...	2,812	.....	.....	.....	.....	.....	*2,500	
	Do.	...	2,812	.....	.....	.....	.....	.....	*2,500	
	Do.	...	2,812	.....	.....	.....	.....	.....	*2,500	

* The sums marked thus are mere approximations, as the punts have yet to be taken out of the water and examined.
† Items marked thus show the actual cost of repairs that have been completed.
‡ The sums marked thus show the amount of estimate made after docking and careful examination. For these estimates are now sent.

Statement showing the Number and Description of the Irrigation Floating Plant in the Godavery District, etc.—(Concluded.)

General No.	Description.	Vessel's Number.	Value.	When last repaired.	Cost of last repair.	Proposed for the present year, 1874-75.		Proposed for next year, 1875-76.		Remarks.
						Ordinary repairs.	Special repairs.	Ordinary repairs.	Special repairs.	
1	2	3	4	5	6	7	8	9	10	11
	Irrigation Plant.—(Concluded.)		Rs.		Rs.	Rs.	Rs.	Rs.	Rs.	
	Canal trap	12	3,837	.....	.....	.....	.....	.....	*2,500	
	Do.	32	2,812	1872-73	1,912	50	.....	50	.....	
	Do.	14	2,812	.....	.....	.....	.....	.....	*2,500	
	Do.	15	2,812	.....	.....	.....	.....	.....	*2,500	
	Do.	16	2,812	.....	.....	.....	§2,574	50	.....	
	Do.	17	2,812	1871-72	813	50	...	50	.....	
	Do.	33	2,811	.....	.....	.....	‡777	50	.....	
	Do.	19	2,812	.....	.....	.....	.....	.....	*2,500	
	Do.	20	2,812	.....	.....	.....	‡2,690	50	...	
	Canal punt	38	2,811	1873-74	2,211	50	.....	50	.....	
	Do.	36	2,812	.....	.....	.....	.....	.....	*2,500	
	Do.	23	2,812	.....	.....	.....	.....	.....	*2,500	
	Do.	24	2,811	.....	.....	.....	‖2,546	50	.....	
	Do.	25	2,811	.....	.....	.....	.....	.....	*2,500	
	Do.	26	2,811	.....	.....	.....	.....	.....	*2,500	
	Do.	27	2,811	1873-74	.....	50	.....	50	.....	Requires repainting.
	Do.	28	2,811	.....	.....	.....	.....	.....	*2,500	
	Do.	29	2,811	.....	.....	.....	†2,398	50	.....	
	Do.	30	2,811	.....	.....	.....	¶1,992	50	.....	
	Do.	31	2,811	1873-74	500	.....	† 2,176	50	.....	
	Do.	32	2,811	.....	.....	.....	2,648	50	.....	
	Do.	...	6,243	.....	.....	.....	.....	65	.....	Was launched.
	Do.	12	4,693	.....	.....	56	.....	56	.....	
	Flat boat	1	1,000	1871-72	428	25	.....	25	.....	Requires repainting.
	Light do.	1	1,000	.....	.....	.....	†56	25	.....	
	Do.	2	1,000	.....	.....	.....	62	25	.....	
	Do.	2	1,000	.....	.....	.....	.....	25	.....	
	Do.	3	1,000	.....	.....	.....	.....	25	.....	
	Do.	29	1,000	1873-74	118	.....	.....	25	.....	
	Do.	34	1,000	.....	.....	.....	74	25	.....	
	Do.	35	1,000	.....	.....	.....	†66	25	.....	
	Do.	33	1,000	.....	.....	.....	74	25	.....	
	Do.	30	1,433	.....	.....	.....	.....	25	.....	
	Do.	31	1,433	.....	.....	.....	.....	25	.....	
	Dredge punt	.....	2,310	.....	.....	.....	.....	25	.....	
	Do.	.....	2,310	.....	.....	.....	.....	25	.....	
	Do.	.....	2,310	.....	.....	.....	.....	25	.....	
	Do.	.....	2,310	.....	.....	.....	.....	25	.....	
	Iron deep boat	2	4,693	1872-73	854	80	.....	80	.....	A new boat; requires repainting; only two years old.
	Do.	8	4,693	.....	.....	*5	.....	25	.....	
	Do.	11	5,000	.....	.....	*45	.....	25	.....	
	Do.	13	4,694	.....	.....	35	.....	35	.....	
	Wooden deep boat	1	2,330	.....	.....	75	.....	75	.....	
	Do.	2	2,117	.....	.....	75	.....	75	.....	
	Do.	10	1,500	.....	.....	50	.....	50	.....	
	Quarry boat	.....	2,000	.....	.....	.....	.....	75	.....	
	Wooden light boat	.....	750	.....	.....	.....	.....	36	.....	
	Do.	.....	750	.....	.....	.....	.....	36	.....	
	Open boat	.....	200	.....	.....	.....	.....	25	.....	
	Do.	.....	200	.....	.....	.....	.....	25	.....	
	Steamer *Rose* converted into a stone boat	.....	5,650	.....	.....	.....	.....	.....	.....	Not shown in the List of 23rd July.
	Open boat	.....	250	.....	.....	.....	.....	40	.....	These boats came down from Dumagudiem with materials two years since and have ever since been in use on the delta works.
	Deep do.	7	400	.....	.....	.....	.....	75	.....	
	Do.	8	400	.....	.....	.....	.....	75	.....	
	Do.	9	...	.....	.....	.....	.....	75	.....	

* The sums marked thus are more approximations, as the punts have yet to be taken out of the water and examined.
† Items marked thus show the actual cost of repairs that have been completed.
‡ The sums marked thus show the amount of estimates made after docking and careful examination. For these estimates are now sent.
§ About 300 Rupees have already been spent, but the rest of the work can be deferred if it is found difficult to provide funds.
‖ About 800 Rupees already spent, but if it be found difficult to provide funds, the rest of the work may be allowed to stand over till next year.
¶ This is the more exact estimate since made; the punt is now in the workshop on the stocks, but work not commenced, and can be deferred if necessary. Estimate is sent herewith.

Statement showing the Number and Description of the Irrigation Floating Plant in the Godavery District, etc.—(Concluded.)

General No.	Description.	Vessel's Number.	Value.	When last repaired.	Cost of last repair.	Proposed for the present year, 1874-75.		Proposed for next year, 1875-76.		Remarks.
						Ordinary repairs.	Special repairs.	Ordinary repairs.	Special repairs.	
1	2	3	4	5	6	7	8	9	10	11
			Rs.		Rs.	Rs.	Rs.	Rs.	Rs.	
	Light boat	.....	400	.....	.....	.....	.....	.....	.....	Not shown in the List of 23rd July.
	Do.	.....	400	.....	.....	.....	.....	.....	.....	Do.
	Add for English value of materials of 32 canal punts fitted together in this country.	....	1,00,000	.....	.....	.....	.....	.....	.....	
	Total ...	.....	.....	.....	.....	4,619	29,692	6,688	37,500	

N.B.—My former list included, by mistake, a wooden flat No. 1, original value Rupees 1,800, which being in a very decayed state and unfit for repair was sold by public auction in May last. This list includes, however, two light boats, now shown at the very bottom of the list, which were omitted by oversight in the list of 23rd July; also the old steamer *Rose* now being converted into a stone boat.

This list, therefore, shows 68 boats = (66—1 + 3), of which 53 can be used for the carriage of stone, and 15 are light boats only useful for the carriage of sand, chunam, and silt.

If funds to the full extent of Rupees 34,311 cannot be found this year, the value of work completed and in progress should be provided for, viz., Rupees 21,790; and, if possible, also sufficient to complete repairs to Punts 16, 24, and 30, *i.e.*, Rupees 21,790 + Rupees 5,512 = Rupees 27,302.

From these several proposed allotments for the year the allotment already given, viz., Rupees 13,000, must be deducted.

DOWLAISHWERAM,
9th October 1874.

(Signed) J. BEATTY, Major, R.E.,
District Engineer, Godavery.

B.

Statement of Irrigation Floating Plant working for the Delta Ranges in the Godavery District.

In or for what Range now working.	Name of Boat.	Old Number.	New Number.	Description of Boats				Dimensions for finding displacement of water.				Dimensions when loaded.				At work or under repair.	Annual maintenance grant required when the plant has been placed in thorough repair.
				Iron or wooden.	Length.	Breadth.	Depth.	Length	Breadth.	Depth.	Tonnage.	Length.	Breadth.	Depth.	Tonnage.		
	Used in the carriage of stone.				Ft. In.	Ft. In.	Ft. In.	Ft. In.	Ft. In.	Ft. In.		Ft. In.	Ft. In.	Ft. In.			
I.	Canal Punt	...	1	Iron flat ...	Not yet measured.			.....	.....	.....	...	.....	.....	.....	...	At work ...	65
I.	Do.	2	2	Iron ...	60 0	10 4	2 9	60 0	9 5	0 10	13	60 0	9 5	1 2	18½	Do. ...	50
III.	Do.	3	3	Do. ...	60 0	10 4	2 9	60 0	9 5	0 10	13	60 0	9 5	1 2	18½	Under repair ...	50
III.	Do.	4	4	Do. ...	60 0	10 4	2 9	60 0	9 5	0 10	13	60 0	9 5	1 2	18½	At work ...	50
I.	Do.	5	5	Do. ...	60 0	10 4	2 9	60 0	9 5	0 10	13	60 0	9 5	1 2	18½	Do. ...	50
I.	Do.	6	6	Do. ...	60 0	10 4	2 9	60 0	9 5	0 10	13	60 0	9 5	1 2	18½	Do. ...	50
I.	Do.	14	7	Do. ...	60 0	10 4	2 9	60 0	9 5	0 10	13	60 0	9 5	1 2	18½	Do. ...	50
I.	Do.	24	8	Do. ...	60 0	10 4	2 9	60 0	9 5	0 10	13	60 0	9 5	1 2	18½	Under repair ...	50
III.	Do.	9	9	Do. ...	60 0	10 4	2 9	60 0	9 5	0 10	13	60 0	9 5	1 2	18½	At work ...	50
I.	Do.	28	10	Do. ...	60 0	10 4	2 9	60 0	9 5	0 10	13	60 0	9 5	1 2	18½	Do. ...	50
I.	Do.	32	11	Do. ...	60 0	10 4	2 9	60 0	9 5	0 10	13	60 0	9 5	1 2	18½	Do. ...	50
I.	Trap Punt (Dredge) ...	12	12	Do. ...	60 0	10 4	2 9	60 0	9 5	0 10	13	60 0	9 5	1 2	18½	Only useful with dredge.	50
I.	Dredge Punt ...	...	13	Do. ...	Not yet measured.			.....	.....	.....	...	.....	.....	.....	...	At work ...	25
III.	Canal Punt	14	14	Do. ...	60 0	10 4	2 9	60 0	9 5	0 10	13	60 0	9 5	1 2	18½	Do. ...	50
III.	Do.	15	15	Do. ...	60 0	10 4	2 9	60 0	9 5	0 10	13	60 0	9 5	1 2	18½	Do. ...	50
I	Do.	16	16	Do. ...	60 0	10 4	2 9	60 0	9 5	0 10	13	60 0	9 5	1 2	18½	Under repair ...	50
III.	Do.	17	17	Do. ...	60 0	10 4	2 9	60 0	9 5	0 10	13	60 0	9 5	1 2	18½	At work ...	50
I.	Dredge Punt ...	...	18	Do. ...	Not yet measured.			.....	.....	.....	...	.....	.....	.....	...	Do. ...	25
III.	Canal Punt	19	19	Do. ...	60 0	10 4	2 9	60 0	9 5	0 10	13	60 0	9 5	1 2	18½	Do. ...	50
I.	Do.	20	20	Do. ...	60 0	10 4	2 9	60 0	9 5	0 10	13	60 0	9 5	1 2	18½	Under repair ...	50
I.	Dredge Punt ...	...	21	Do. ...	Not yet measured.			.....	.....	.....	...	.....	.....	.....	...	At work ...	25
I.	Do.	...	22	Do. ...	Do.			.....	.....	.....	...	.....	.....	.....	...	Do. ...	25
I.	Canal Punt	23	23	Do. ...	60 0	10 4	2 9	60 0	9 5	0 10	13	60 0	9 5	1 2	18½	Do. ...	50
III.	Do	24	24	Do. ...	60 0	10 4	2 9	60 0	9 5	0 10	13	60 0	9 5	1 2	18½	Under repair ...	50
III.	Do.	25	25	Do. ...	60 0	10 4	2 9	60 0	9 5	0 10	13	60 0	9 5	1 2	18½	At work ...	50
III.	Do.	26	26	Do. ...	60 0	10 4	2 9	60 0	9 5	0 10	13	60 0	9 5	1 2	18½	Do. ...	50
III.	Do.	27	27	Do. ...	60 0	10 4	2 9	60 0	9 5	0 10	13	60 0	9 5	1 2	18½	Do. ...	50
III.	Do.	28	28	Do. ...	60 0	10 4	2 9	60 0	9 5	0 10	13	60 0	9 5	1 2	18½	Do. ...	50
III.	Do.	29	29	Do. ...	60 0	10 4	2 9	60 0	9 5	0 10	13	60 0	9 5	1 2	18½	Do. ...	50
III.	Do.	30	30	Do. ...	60 0	10 4	2 9	60 0	9 5	0 10	13	60 0	9 5	1 2	18½	Under repair ...	50
III.	Do.	31	31	Do. ...	60 0	10 4	2 9	60 0	9 5	0 10	13	60 0	9 5	1 2	18½	At work ...	50
III.	Do.	32	32	Do. ...	60 0	10 4	2 9	60 0	9 5	0 10	13	60 0	9 5	1 2	18½	Under repair ...	50
III.	Do.	33	33	Do. ...	60 0	10 4	2 9	60 0	9 5	0 10	13	60 0	9 5	1 2	18½	At work ...	50
III.	Do	12	34	Iron flat ...	61 0	11 5	3 9	61 0	11 0	1 0	18½	61 0	11 0	1 6	28	Do. ...	56
III.	Do.	...	35	Wooden do ..	Being used as ferry boat.			.....	.....	.....	...	.....	.....	.....	...	Do. ...	25
III.	Do.	36	36	Iron ...	60 0	10 4	2 9	60 0	9 5	0 10	13	60 0	9 5	1 2	18½	Do. ...	50
III.	Do.	37	37	Do. ...	60 0	10 4	2 9	60 0	9 5	0 10	13	60 0	9 5	1 2	18½	Do. ...	50
III.	Do.	38	38	Do. ...	60 0	10 4	2 9	60 0	9 5	0 10	13	60 0	9 5	1 2	18½	Do ...	50
I.	Do.	27	39	Do. ...	60 0	10 4	2 9	60 0	9 5	0 10	13	60 0	9 5	1 2	18½	Do ...	50
I.	Deep Boat	2	40	Do. ...	80 6	10 8	5 0	80 6	10 0	1 9	39	80 6	10 0	2 8	50½	Do. ...	80

Statement of Irrigation Floating Plant working for the Delta Ranges in the Godavery District.—(Concluded.)

In or for what Range now working.	Name of Boat.	Old Number.	New Number.	Description of Boats. Iron or wooden.	Description of Boats. Length.	Description of Boats. Breadth.	Description of Boats. Depth.	Dimensions when loaded. Length.	Dimensions when loaded. Breadth.	Dimensions when loaded. Depth.	Dimensions when loaded. Tonnage.	At work or under repair.	Annual maintenance grant required when the plant has been placed in thorough repair.
					Ft. In.	Ft. In.	Ft. In.	Ft. In.	Ft. In.	Ft. In.	Tonnage.		
	Used in the carriage of stone—(Concluded.)												
I.	Deep Boat	8	41	Iron	60 0	11 6	1 6	60 0	11 6	2 6	48	At work.	50
I.	Do.	11	42	Do.	93 8	9 0	.....	93 8	9 0	2 11	48½	Do.	25
I.	Do.	13	43	Do.	73 6	8 8	1 3	73 6	8 8	2 0	35½	Do.	35
I.	Do.	1	44	Wooden	73 0	10 ½	2 10	73 0	10 ½	2 5	48½	Do.	75
I.	Do.	2	45	Do.	43 0	11 2	1 8	43 0	11 2	2 4	31½	Do.	75
I.	Do.	10	46	Do.	73 0	10 8	1 5	73 0	10 8	2 4	50½	Do.	50
I.	Do.	7	47	Do.	73 0	10 8	1 5	73 0	10 8	2 4	50½	Do.	75
I.	Do.	6	48	Do.	73 0	10 8	1 5	73 0	10 8	2 4	50½	Do.	75
I.	Do.	9	49	Do.	73 0	10 8	1 5	73 0	10 8	2 4	50½	Do.	75
I.	Do.	...	50	Do.	73 0	9 10	1 0	73 0	9 10	2 3	44½	Do.	75
II.	Do.	...	51	Do.	43 0	9 0	0 10	43 0	9 0	1 9	19	Do.	50
II.	Do.	...	52	Do.	43 0	9 0	0 10	43 0	9 0	1 9	19	Do.	50
I.	Steamer Rose	...	53	Do.	.....	.....	.....	.....	.....	.....	...	At Workshop...	150
													3,304
	Light Boats used only for chunam, concrete, sand, or silt.												
III.	Deep Boat	1	65	Iron	35 0	7 1	0 6	35 0	7 1	1 9	12½	At work	35
III.	Do.	2	66	Do.	.....	.....	.....	.....	.....	.....	...	Do.	35
III.	Do.	3	67	Do.	35 0	7 1	0 6	35 0	7 1	1 9	12½	Do.	35
III.	Do.	4	68	Do.	.....	.....	.....	.....	.....	.....	...	Do.	35
III.	Do.	29	69	Do.	.....	.....	.....	.....	.....	.....	...	Do.	35
III.	Do.	30	70	Do.	.....	.....	.....	.....	.....	.....	...	Do.	35
III.	Do.	31	71	Do.	.....	.....	.....	.....	.....	.....	...	Do.	35
III.	Do.	33	73	Do.	.....	.....	.....	.....	.....	.....	...	Do.	35
III.	Do.	34	74	Do.	.....	.....	.....	.....	.....	.....	...	Do.	35
III.	Do.	35	75	Do.	.....	.....	.....	.....	.....	.....	...	Do.	35
I.	Do.	...	76	Wooden	35 0	7 1	0 6	35 0	7 1	1 9	12½	Do.	35
III.	Do.	...	77	Do.	40 0	8 0	0 9	40 0	8 0	1 6	13½	Do.	25
III.	Do.	...	78	Do.	.....	.....	.....	.....	.....	.....	...	Do.	25
II.	Do.	...	79	Do.	.....	.....	.....	.....	.....	.....	...	Do.	25
	Total	...	...	...	...	...	...	.....	.....	.....	...	.....	.....

	Description of Boats. Length.	Breadth	Depth.	Dimensions when displacement of water. Length.	Breadth.	Depth.	Tonnage.
	Ft. In.	Ft. In.	Ft. In.	Ft. In.	Ft. In.	Ft. In.	
Used in the carriage of stone—(Concluded.)							
Deep Boat	60 0	12 6	5 0	60 0	11 0	6 0	48
Do.	93 8	Not yet measured.	4 0	98 8	9 0	2 11	48½
Do.	73 6	10 0	4 6	73 6	8 8	2 0	35½
Do.	73 0	12 8	4 10	73 0	10 ½	2 5	48½
Do.	43 8	12 8	4 10	43 8	11 2	1 8	31½
Do.	73 0	12 0	4 6	73 0	10 8	2 4	50½
Do.	73 0	12 0	4 6	73 0	10 8	2 4	50½
Do.	73 0	12 0	4 6	73 0	10 8	2 4	50½
Do.	72 0	12 0	4 6	72 0	10 8	2 4	50½
Do.	40 0	9 7	3 6	40 0	9 0	1 9	19
Do.	40 0	9 7	3 6	40 0	9 0	1 9	19
Steamer Rose	Being converted as stone boat.						
Light Boats used only for chunam, concrete, sand, or silt.							
Deep Boat	35 0	8 6	3 0	35 0	7 1	1 9	12½
Do.	.....	Not yet measured.		.....	.....	.....	...
Do.	35 0	8 4	3 0	35 0	7 1	1 9	12½
Do.	.....	Not yet measured.		.....	.....	.....	...
Do.	.....	.....	.....	.....	.....	.....	...
Do.	.....	.....	.....	.....	.....	.....	...
Do.	.....	.....	.....	.....	.....	.....	...
Do.	.....	.....	.....	.....	.....	.....	...
Do.	.....	.....	.....	.....	.....	.....	...
Do.	35 0	8 6	3 0	35 0	7 1	1 9	12½
Do.	40 0	Not yet measured.		40 0	8 0	1 6	13½
Do.	.....	.....	.....	.....	.....	.....	...
Do.	.....	.....	.....	.....	.....	.....	...
Do.	.....	.....	.....	.....	.....	.....	...
Total	.....	.....	.....	.....	.....	.....	...

N. B.—This list shows 63 boats altogether, as it does not include the wooden flat No. 1, original value 1,300 Rupees, which was sold in May last.

(Signed) J. BEATTY, Major, R.E.,
District Engineer, Godavery.

DOWLAISHWERAM,
6th October 1874.

Proceedings of the Madras Government, Public Works Department,
29th December 1874.

From Captain R. R. E. BROCKMAN, R.E., Executive Engineer in charge No. 1 or Eastern Delta Range, Godavery District, to Major J. BEATTY, R.E., District Engineer, Godavery District, dated Dowlaishweram, 22nd September 1874, No. 305.

WITH reference to G. O., No. 2,271, dated 17th August last, relative to the maintenance and repair allotments for the irrigation and harbour floating plant for the current year, I have the honor to forward a list showing the amounts due to the workshop for work already done and in progress for repairing the former plant, amounting in aggregate to Rupees 25,074-4-4.

2. Upon the receipt of the Chief Engineer's order to proceed with the repairs of the irrigation plant, the punts which had been examined and were lying in the workshop yard were taken in hand, and their repairs energetically proceeded with. Six punts, for which detailed estimates have been furnished to your office, are now on the stock, and all the iron plates required for their repair have been issued and cut up, so that it is absolutely necessary that the money for settling the workshop bills to that amount should be forthcoming.

3. The amount allotted in the Government Order for this purpose is only Rupees 13,000, my requisition having been for Rupees 38,589 in the statement forwarded with my letter, No. 182, dated 13th July 1874, and as revised by you. Under these circumstances, there is still a sum of Rs. 12,075 to be provided, exclusive of a further amount for the petty repairs, such as painting, tarring, and caulking to the remainder of the floating plant which will be from time to time required, and without which they will surely deteriorate still further.

4. The original book value of the irrigation plant borne on my registers amounts to Rupees 4,16,124, to which must be added at least 1,00,000 more for the English value of the materials forming the 32 canal punts which were fitted together out here. Upon this total value of Rupees 5,16,124 it would not be asking too much, I consider, if at least 5 per cent. were appropriated yearly to the up-keep of this plant, or about Rupees 25,000 per annum. But this amount is all that is now asked for to *renovate* the plant which through a series of years has been allowed to deteriorate into its present almost precarious condition.

* * * * *

(True Extract.)
(Signed) J. BEATTY, Major, R.E.,
District Engineer, Godavery.

No. 899-C.

No. 495. *Note by the Chief Engineer for Irrigation.*

THE District Engineer, Godavery, and Captain Brockman have, I think, dealt very thoroughly and completely with the important subject of the repair and up-keep of the irrigation plant, and in their hands it may be hoped that its condition after a year or two will be altogether creditable.

2. The history of the steamer *Prince* I am not fully acquainted with. That she could never have been intended for the delta is manifest, and I presume that she was obtained for the river navigation. It is believed that she can navigate the river to the 1st Barrier. If she be unfitted for that duty she is fit for no other, and at any rate there appears to be no reason why she should be borne on the list of irrigation floating plant.

3. The boats and punts formerly belonging to the Upper Godavery, but now used in the delta, may, as now explained by the District Engineer, be properly included in the list of delta plant.

4. The sum asked for by the District Engineer for the current year is for—

	Rs.
Repairs, ordinary	4,619
Deduct the amount entered for the steamer *Prince*	980
	3,639
Repairs, special	29,692
Total ...	33,331

In Government Order of the 17th August last, No. 2,271, the total amount placed at Major Beatty's disposal was Rupees 13,000, and Rupees 20,000 additional are therefore needed. The sum still available from the Budget provision of Rupees 11,960 at the disposal of Government is Rupees 5,804, and this will not suffice for even the work which has already been undertaken, and the cost of which has been estimated at Rupees 21,790. I beg therefore to recommend that Rupees 15,000 be transferred from Repairs Agricultural to Repairs Tools and Plant, Irrigation, and that the District Engineer be authorized to proceed as rapidly as possible with the repair of the floating plant. It is of importance that as much of this very necessary and much too long deferred work, as may be practicable, should be done this year, for there will be still more than enough to do next year. It appears, moreover, to be quite legitimate to make the transfer recommended, and though repair funds are very urgently required in many parts of the Presidency, probably none of the demands for money are more urgent than is that for this plant.

5. In 1875-76 the further outlay on ordinary and special repairs is estimated as follows, and all the special repairs will then be completed:—

	Rs.
Ordinary repairs	6,688
Deduct for steamer *Prince*	980
	5,708
Special repairs...	37,500
Total ...	43,208

Provision can be made for this expenditure in the Budget now under compilation.

6. It will be noticed in connection with paragraph 8 of the Order of Government as per margin, that the apparent disproportion between the cost of repairs and the original cost of certain punts is due to the circumstance that only outlay in India was exhibited under the latter heading. If possible, the entire cost of all plant should be ascertained and entered in the books; the expenditure incurred in England is probably on record somewhere.

17th August 1874, No. 2,271.

7. In paragraph 8 of his letter, Major Beatty suggests that the steel barges belonging to the river navigation should be used on the anicut and delta works during the portion of the year that the Upper Godavery steamers will not be running. That they would be very useful in the delta there can be no doubt; but, so long as it may be intended to carry on the river navigation, it will be as well to reserve these steel barges for that service only. The delta and anicut work is rough work, and the barges might not be in repair and fit for the river service were they to be used in carrying materials for the delta works.

8. The Chief Engineer, Public Works Department, will no doubt dispose of that portion of the District Engineer's letter which refers to plant other than Irrigation.

TUTICORIN, *3rd November* 1874.

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

No. 496. ORDER THEREON, 29th December 1874, No. 3,621.

IRRIGATION, No. 42.

THE requirements of the Irrigation floating plant of the Godavery Delta have been very fully gone into by the District Engineer and Range Officer, and it has been shown that Rupees 33,331 are needed for ordinary and special repairs during the current year and Rupees 43,208 in 1875-76. These figures are quite sufficient to show that this plant, the value of which is believed to be about 4 lakhs of Rupees, had deteriorated, and that it was necessary that a thorough examination should be made and energetic measures adopted for its restoration to a condition of efficiency. Major Beatty has fully appreciated this necessity, and considerable progress has already been made in carrying out the more emergent work found to be requisite.

2. There not being, in the Budget provision under Tools and Plant for this year, nearly enough money to meet this exceptional demand, application will be made to the Government of India for an additional sum of Rupees 15,000, and in anticipation of the receipt of sanction the District Engineer will be authorized to proceed with the more emergent repairs, it being evident that, if any further delay be allowed to occur, much of the floating plant will become absolutely unserviceable, thereby occasioning grave inconvenience, which must be avoided if possible. These Proceedings will be forwarded to the Government of India in support of the application, and it will be pointed out that the unsatisfactory state of this plant has engaged attention for the last four years nearly, but that the Government have not till very recently been in a position to apply an effective remedy.

3. Separate orders will be passed on the non-irrigation floating plant attached to the Godavery District. The steamer *Prince* will be omitted from the list of irrigation plant, to which it appears not properly to belong.

4. Adequate provision, as already directed, will be made in the Budget of 1875-76 for the funds required in that year for completing the special repairs of the floating plant, and for ordinary repairs also.

5. On the whole the Government consider that it will be desirable to reserve the steel barges belonging to the Godavery River Navigation for that service exclusively.

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

To the Chief Engineer for Irrigation.
" District Engineer, Godavery.
" Comptroller.

Exd. S. T. Austin.
Spare Copies

No 2147

From,

District Engineer's Office, Godavery.
Dowlaishweram 9th October 1874
Dispd 12th do

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

To,

Lieutenant Colonel J. Mullins R.E.
Chief Engineer for Irrigation.
Madras.

Forwarded
1 Statement
marked A
1 do Sheeted
C
1 Report to the
Canal Officer
1 Estimates
received 24

Sir,

As requested in your Memorandum No 752 of 11th Ultimo, I have now the honor to report further on the repairs of the Irrigation Plant of the District, with reference to G.O. No 2271 of 17th August 1874.

× Deshaleshwaram Schanalcanal

2. On 23rd July last, I submitted one general list of the whole floating plant of the District, including Irrigation, Harbour, Upper Godavery Navigation, & Local Fund and proposed an expenditure for the present year, on the Irrigation and Harbour plant only, in ordinary and special repairs, amounting to Rs 41,608 that being, it was believed, the utmost the Workshops could undertake to carry out this year.

3. In now separating the plant into

four

four lists and revising the proposed expenditure with reference to the more exact information possessed of the state of the plant, address to the same × total value of work to be done, but have reduced the share of it to be devoted to the Irrigation Plant and increased the demand for Harbour Plant.

× as nearly as practicable

4. Some of the Harbour punts long known to be in a very inefficient state, but which it was hoped might be made to work through another dredging season, have since been brought into the Workshop and on examination found to be so decayed that it would be unsafe to attempt using them further until extensive repairs have been done, and this is most urgent as the dredging of Cocanada bar cannot be carried on without them, and the traffic of the port would be seriously obstructed.

5. I have therefore altered the proposed expenditure as follows:—

Proposal.

	Proposal of 23rd July.		Now proposed.	
	ordinary	special	ordinary	special
Irrigation	6246	32343	4619	29692
Harbour	1950	1069	1450	7276
Total	8196	33412	6069	36968
Grand Total	41608		43037	

6 In para 2 of that order it is proposed to transfer the Steamer "Prince", the three deep boats Nos. 7, 8, 9, and the wooden flat of 5½ tons, marked U. G. in the District Engineer's list of 27th April 1874, to a separate statement of Upper Godavery Navigation Plant. This however cannot fairly be done, as the steamer "Prince" is not suited to the Upper Godavery navigation being too broad to pass through the Locks, and the three deep boats were originally employed on the Upper Godavery irrigation works, they were irregularly transferred to the Lower Godavery two years since. They came down with stores, were retained for use on the Delta works, and have ever since been working here

Width of Steamer, including paddle boxes, 43 feet; width of locks 30 feet.

here. The wooden flat carrying capacity 5½ tons was regularly transferred in 1872, and is now working in the Western Delta.

7. As directed the steamer "Godavery" and her steel barges, specially built for the river navigation, shall be shown in a separate list of Upper Godavery Navigation Plant, but under the above explanation I shall continue for the present entering the "Prince", and the four Upper Godavery boats that came into our possession two years since, in the list of Irrigation Plant.

8. Again, as regards the steel barges, which will be required exclusively for the river navigation from 15th June to 15th November, these might be most useful to the Annicut and Delta works during the remaining seven months of the year, and if they are so employed it would be proper to charge half their maintenance to Irrigation. The total cost of maintaining each of the steel barges would be about 100 Rupees a year.

9. As stated in para 2, the "Prince" cannot be used on the navigation of the Upper Godavery as an alternative vessel, and for this purpose it will be necessary, if Government determine to continue running the steamers on the river, to get down one of the other two steamers, "Wurdah" and "Wynegunga", which were built expressly for the navigation. The "Wurdah" would be best, being the more easily worked.

10 The Irrigation Floating Plant is as follows:-

4 Steamers, "Thistle", "Little Nell" "Fawn", and "Prince".

6 Canal Dredges.

53 Punts; fit for carriage of stone.

15 Punts; suitable only for concrete, channam, or silt.

A I now send a fresh statement showing the sums asked for, in my list of 23rd July 1874 for the present year, corrected according to the more exact information now possessed in regard to the state of the plant; and the expenditure proposed for next year to complete the special repairs and maintain the plant efficiently.

11 On receipt of your telegram× directing me to proceed with the repairs of the irrigation plant, the irrigation punts then in

× of 5th August.

in the Workshops were put in hand at once, and to the extent of ordinary and special repairs to the extent of 34,311 Rupees can be carried out this year if funds be provided, but pending further instructions work will only be undertaken to the extent already in progress, viz, Rs 21790 —, as it seems doubtful whether funds can be found this year to the full extent of the repairs of both kinds now proposed. It seems doubtful whether the Workshops now that the year is so far advanced could spend more than Rs. 43,037 on the two descriptions of plant Irrigation and Harbour, say Rs 34311 on Irrigation and Rs. 8726 on Harbour.

× vide para 5

* vide statement marked C

12. The renumbering and measurement of the plant as directed in para 14 of Chief Engineer's Memorandum No. 184 C. of 26th February 1874 is being carried out, and the progress made up to date is shown in a separate statement marked B.

Statement B will be forwarded in a few days

13. With reference to the remarks in para 5 of the G. O., I beg to explain that in the list dated 27th April 1874, column 20 showed the actual average

average expenditure during the preceding three years on such of the plant as had been repaired from "Tools and Plant", as shown by the accounts; and was not intended to show what it was believed would in future be necessary to maintain the plant in a state of efficiency. This is now × given so far as it can be calculated. The repairs of the small dredge No. III had cost more than the others in up-keep, because that Dredge had been most used.

× Vide accompanying statement marked B Column 7.

14 " No further repairs were required in last year for Canal Dredge No. VII as it had just been put in good order at an expense of Rs. 138, as shown in the printed list. That sum was the actual cost of up-keep for the year 1873-74 vide para 6 of the G. O.

15. " Estimates for special repairs to 13 punts only have yet been prepared, because it has not been possible to bring the others into the Workshop and examine them, and without docking and thorough examination estimates must be a mere guess.

16. It is remarked in para 8 of the G. O. that

that the cost of the special repairs to the punts are apparently very heavy as compared with their "original cost," but in regard to that "original cost" as I have already pointed out in para 2 of my letter No. 1294 of 23rd July 1874, this Office is unable to give the full value of the plant, but only so much of it as was incurred in this country for freight from England fitting up &c. The actual value was probably on the average about 6387 Rupees a punt, and it has to be remembered that much of this plant has been working for many years without even ordinary repairs.

17. I have, pending further instructions, retained No. 33 iron chunam punt in my list of irrigation plant; because, as shown in column 4 of the printed list of 27th April, it was purchased from the Upper Godavery in March 1871 for the irrigation work of the Delta, and has been so used ever since.

18. The steel barges belonging to the Steamers "Godavery", "Wurda", and "Wynegunga" were not entered either in the list of 27th April or in that of 23rd July, and these will now be shown in the separate list of Upper Godavery Navigation Plant.

19. The charge for a watchman employed on the Steam dredge kept in the Western Delta No. 6, Rupees 78 should have been charged to the maintenance of that dredge.
This is an annual charge.

20. The general result of the revision now made is that whereas Rs. 41,608 were asked for in the statement of 23rd July, for this year, according to the accompanying revised statement work to the extent of Rupees 43,037 should be proceeded with, if funds can be provided; and repairs to the extent of Rs. 21,793 have already been carried out, or are now in hand. To meet this expenditure up to this time Rs. 13000 have been provided, and the balance Rs. 21,311 has yet to be allotted, or such portion of it as may be found practicable, to the extent at least of Rs. 8,790, to cover work already undertaken. In order to make my present demand as moderate as possible I have struck out the ordinary repairs previously proposed from all plant that is to receive special repair in next official year.

for irrigation only.

21. I send also a report from the Office in

in charge of the Eastern Delta Range who justly observes that the charges proposed cannot be regarded as unreasonable considering the great value of the plant that has to be maintained.

I have the honor to be,
Sir,
Your most obedient Servt.
C. Beatty. Major R.E.
District Engineer Godavery.

No 305

Dowlaiswaram
Executive Engineers Office
22 nd September 1874.

From

Captain R.N.B Buckman R.E.
Executive Engineer in charge
1st Eastern Delta Range
G.D.

To

Major J Beatty R.E.
District Engineer G.D.
Dowlaiswaram

Sir,

With reference to G.O No 2241
dated 17th August last relative to the
maintenance and repair allowance for
the Irrigation and Harbour floating Plant
for the present year, I have the honor
to forward a list showing the amounts
due to the Workshop for work already
done and in progress for repairing the
former Plant remaining in use together
Rupees 5044-4-4.

2. Upon the receipt of the Chief Engineers
order to proceed with the repairs of the
Irrigation

To Secy to Govt No 879C
dt 3d Novr/74.

From, C.E. No. 1932
dt 9th Oct.
The District Engineer
Godavery.

To The Chief Engineer
for Irrigation.
C.W. 7113/74

Dated 9th
Recd 19th } October 1874

No 2147
Enclosures Seven
1 Statement 2 Plans
Total - 8

Submitting revised List of Irrigation Floating Plant, showing the additional funds required for ordinary and special repairs in 1874-75 & 1875-76.

Pl. 7 29 Dec 1874
Rs 22/10/74. No 3621.

No 494

Irrigation Plant the punts which had been examined and were lying in the Workshop yard were taken in hand, and their repairs energetically proceeded with. Six Punts for which detailed Estimates have been furnished to your office are now on the Stock and all the Iron plates required for their repair have been issued and cut up, so that it is absolutely necessary that the money for settling the Workshop Bills to that amount should be forthcoming.

3 The Amount allotted in the G.O. for this purpose is only Rs. 13,000 my requisition having been for Rs 38,589 in the Statement forwarded with my letter No. 182 dated 13th July 1874 and as revised by you. Under these circumstances there is still a sum of Rs 12,075 to be provided exclusive of a further amount for the petty repairs such as painting, tarring & caulking to the remainder of the floating plant which will be from time to time required and without which they will surely deteriorate still further.

4. The Original book value of the Irrigation Plant borne on my registers amounts to Rs 4,16,124 to which must be added at least 1,00,000 more for the English value of the Materials forming the 32 Canal Punts which were fitted together out here. Upon this total value of Rupees 5,16,124 it would not be asking too much, I consider, if at least 5 per cent. were appropriated yearly to the upkeep of this Plant, or about Rupees 25,000 per annum. But this amount is all that is now asked for to renovate the plant which through a series of years has been allowed to deteriorate into its present almost precarious condition.

× × ×

I have &c. &c.

(Signed) R.N.C. Brackman Capt.
Exec: Engineer Godavery Distt.

(True Extract)

L. Beatty. Major &c.
District Engineer Godavery.

Extd G.B.

Bo 2/1932/74

Enclosure in a letter
No 2147 of 9th October 1874
from the District Engr
Godavery to the Chief
Engineer for Irrigation

Pl. N 29 Dec/74
In Bdl. No 495.

P. W. 7113/74

9

Report by Capt.
Brockman R.E on the
~~State~~ of the Floating
Plant.

original value Rs 1,500—"—", which being in a very decayed state and unfit for repair, was sold by public auction in May last; This list includes, however, two Light Boats, now shown at the very bottom of the list, which were omitted by oversight in the list of 23d July; also the old steamer "Rose" now being converted into a stone boat.

This list, therefore, shows 68 boats = (66 − 1 + 3), of which 53 or 51 can be used for the carriage of stone, and 15 or 17 are light boats only useful for the carriage of sand, chunam, and silt.

If funds to the full extent of Rs 34,311 cannot be found this year, the value of work completed and in progress should be provided for, viz. Rupees 21,790; and if possible, also, sufficient to complete repairs to punts 16, 24, and 30, i.e, Rupees 21,790 + Rupees 5,512 = Rs 27,302.

From these several proposed allotments for the year, the allotment already given, viz, Rs 13,000, must be deducted.

District Engr Office
Dowlaishweram
9th October 1874

R Beatty Major RE
District Engineer Godavery

Dredge Punt	"	2310	"	"	"	"	25	"	
Do	"	2310	"	"	"	"	25	"	
Do	"	2310	"	"	"	"	25	"	
Do	"	2310	"	"	"	"	25	"	
Iron deck boat	2	4693	1872-73	854	80	"	80	"	A new boat; requires repainting; only two years old.
Do	8	4693	"	"	5 *	"	25	"	
Do	11	5000	"	"	45 *	"	25	"	
Do	13	4694	"	"	35	"	35	"	
Wooden deck Boat	1	2,330	"	"	75	"	75	"	
Do	2	2,117	"	"	75	"	75	"	
Do	10	1500	"	"	50	"	50	"	
Quarry Boat	"	2,000	"	"	"	"	75	"	
Wooden Light Boat	"	750	"	"	"	"	36	"	
Do		750	"	"	"	"	36	"	
Open Boat	"	200	"	"	"	"	25	"	
Do	"	250	"	"	"	"	25	"	
Steamer "Rose" converted into a stone boat	"	5,650	"	"	"	"	"	"	Not shown in the List of 23rd July.
Open Boat	"	250	"	"	"	"	40	"	These boats came down from Dunnaquadiem with materials two years since and have ever since been in use on the Delta Works.
Deep Boat	7	400	"	"	"	"	75	"	
Do	8	400	"	"	"	"	75	"	
Do	9	"	"	"	"	"	75	"	
Light Boat	"	400	"	"	"	"	"	"	Not shown in the List of 23rd July.
Do	"	400	"	"	"	"	"	"	
Add for English value of materials of 32 Canal Punts fitted together in this Country		100,000							
			Total -	4,619	29,692	6,688	37500		

N. B. My former list included, by mistake, a wooden flat No. 17

11

12

original

Do Trap	19	2812	"	"	"	"	"	⊗ 2,500	
Do	20	2812	"	"	"	× 2,690	50	"	
Canal Punt	38	2811	1873-74	2211	50	"	50	"	
Do	36	2812	"	"	"	"	"	⊗ 2,500	
Do	23	2812	"	"	"	"	"	⊗ 2,500	
Do	24	2811	"	"	"	⊗ 2,546	50	"	⊗ About 800 Rs already spent but if it be found difficult to provide funds, the rest of the work may be allowed to stand over till next year.
Do	25	2811	"	"	"	"	"	⊗ 2,500	
Do	26	2811	"	"	"	"	"	⊗ 2,500	
Do	27	2811	1873-74	"	50	"	50	"	Requires repainting.
Do	28	2811	"	"	"	"	"	⊗ 2,500	
Do	29	2811	"	"	"	* 2398	50	"	
Do	30	2811	"	"	"	⊗ 1992	50	"	⊗ This is the more exact estimate since made, the Punt is now in the Workshop on the stocks, but work not commenced and can be deferred if necessary estimate is sent herewith.

Do	31	2811	1873-74	500	"	* 2176	50	"	
Do	32	2811	"	"	"	2648	50	"	
Do	"	6243	"	"	"	"	65	"	Was launched.
Flat Boat	12	4693	"	"	56	"	56	"	
Light Boat	1	1000	1871-72	428	25	"	25	"	Requires repainting.
Do	1	1000	"	"	"	* 56	25	"	
Do	2	1000	"	"	"	62	25	"	
Do	2	1000	"	"	"	"	25	"	
Do	3	1000	"	"	"	"	25	"	√
Do	29	1000	1873-74	118	"	"	25	"	
Do	34	1000	"	"	"	74	25	"	
Do	35	1000	"	"	"	* 66	25	"	
Do	33	1000	"	"	"	74	25	"	
Do	30	1433	"	"	"	"	25	"	
Do	31	1433	"	"	"	"	25	"	

Form No. 19.

Form A. [illegible]

Statement showing the number and description of the Irrigation Floating Plant in the Godavery District and repairs proposed to each in the present and in next year.

Description.	Vessel's Number.	Value.	When last repaired.	Cost of last repair.	Proposed for the present year. 1874-75. Ordinary repairs.	Proposed for the present year. 1874-75. Special repairs.	Proposed for next year. 1875-76. Ordinary repairs.	Proposed for next year. 1875-76. Special repairs.	Remarks.
1	2	3	5	6	7	8	9	10	11
Steamer Prince	"	33,000	"	"	980	"	980	"	[illegible]
do Fairie	"	20,014	"	"	"	2817	450	"	
do Little Nell	"	16,436	1873-74	3287	478	"	630	"	
do Fawn	"	1,800	1872-73	1189	250	"	390	"	
Canal Sledge	II	26,373	1867-68	3850	250	"	425	"	
do	III	16,396	1873-74	"	315	"	315	"	
do	IV	30,437	1872-73	"	425	"	425	"	
do	VI	30,437	1873-74	"	425	"	425	"	
do	VII	30,437	1872-73	"	425	"	"	2500	
do	VIII	31097	1873-74	"	425	"	425	"	⊗ The sums marked thus are mere approximations as the punts have yet to be taken out of the water and examined.
Canal Punt	3	2812	"	"	"	"	"	⊗ 2500	
do	14	2811	"	"	"	* 521	50	"	
do	3	2811	"	"	"	× 2690	50	"	* Items marked thus show the actual cost of repairs that have been [illegible]
do	4	2811	"	"	"	* 541	50	"	
do	5	2812	"	"	"	"	"	⊗ 2500	
do	6	2812	1873-74	1785	"	"	50	"	
do	24	2812	"	"	"	× 2583	50	"	× The sums marked thus show the amount of estimates made after docking and careful examination. For these estimates are now sent.
do	27	2812	"	"	"	* 2437	50	"	
do	9	2812	"	"	"	"	"	⊗ 2500	
do	28	2812	"	"	"	"	"	⊗ 2500	
do	37	2812	"	"	"	"	"	⊗ 2500	
do Trap	12	3837	"	"	"	"	"	⊗ 2500	
do	32	2812	1872-73	1912	50	"	50	"	
do	14	2812	"	"	"	"	"	⊗ 2500	
do	15	2812	"	"	"	"	"	⊗ 2500	
do	16	2812	"	"	"	⊗ 2574	50		⊗ About 800 Rs have already been spent, but the rest of the work can be deferred if it is found difficult to provide funds.
do	17	2812	1871-72	813	50	"	50	"	
do	83	2811	"	"	"	* 777	50	"	
2	17	4	4	4	4	1	4	4	

Gen 1/1903/74
Enclosure in a
letter No 2147. of 9
October/74 from the
District Engineer Gdy
to the Chief Engineer
for Irrigation -

Statement of
repairs required
to the Floating Plant

A

P. W. 7113/74
6
Pg. No 29 D. 1/74
Dn B.N: 495.

Memorandum

The Government having decided to allow the transfer of Agricultural repair funds to admit of the repair of floating plant in the Godavery District one with, Dam at a lost to know what course to suspect. Ultimately in the account, outlay on repairs of plant and that on irrigation works of the Delta generally is chargeable to the same head. Revenue, and it is merely a matter of detail that outlay against Revenue is exhibited under several main heads.

2. If funds be not forthcoming the floating plant will be thrown out of employ, and as it is already unequal to the work to be done, the results will certainly be what the Government would be sorry to see. Otherwise it would be simpler to charge a good deal of the outlay to Capital, seeing that much of the wear and tear is due to the carrying of materials for new works, but that arrangement would be contrary to the

principles upon which the accounts are now kept, and I do not suppose that the Govern-ment of India would consent to it.

3. The Government have no funds at their disposal, and I can make no suggestion for transfers from other heads, as under none has there during any part of the current year been money to spare. I have already brought to notice that the grants under Ordinary are quite inadequate to meet the demands which cannot be postponed without inconvenience.

4. Under these circumstances the decision must I think be either

1st to postpone repairs until next year in spite of the inconvenience, and, even if this be done, the work now in hand will cause an excess outlay over the grant for tools and plant repair, or

2ndly to ask the Government of India to sanction an additional sum of Rupees 15,000 under this head and to authorize the District Engineer to go on with the repairs in the mean time. I do not suppose the Govern-ment of India will accord the sanction, and if an answer to the application be awaited it will vir-tually amount to an adoption of the first alternative.

Alternative drafts for para 2 of the order are submitted.

W. 3/1/74

I do not consider either of the alternative drafts preferable to the original. It is a mere matter of account, and [illegible] whether the Agricultural Repairs Allotment be indented on, or addl funds sup-plied for specially for Repairs of Tools & Plant. The latter require more: sent repairs, and the

speediest way of ob-
taining funds is by
a Transfer, subject to
confirmation of the
Govt. of India - Should
more Agricultural Re-
pair funds be req?
hereafter, in consequence,
the circumstances of
the country are such
that the Govt. of In-
dia cannot but re-
gard other calls - but
even if £ 15000 are
spent in excess of Al-
lotment, this is a sum
not worth mentioning -
Most Expenditure on
Rly Works in the Go-
vernment must sanc-
tion continued neglect
of Plant -

Lyall
10.12.74

2. The Government greatly re-
gret that they are altogether un-
able to provide the District Engi-
neer with funds for the work
which could, were money availa-
ble, be carried out this year.
Apart from the objection, which
might be taken on general
grounds, to the proposal of the
Chief Engineer for Irrigation
to transfer Rupees 15,000 from
the grant for Agricultural
Repairs, the serious damage to
irrigation

irrigation works, which has occurred from the floods of September, October and November in many Districts, will make such a transfer impracticable. While therefore fully aware of the great inconvenience which is likely to result from a postponement of the restoration to efficiency of the floating plant of the Delta, the Government have no alternative but to direct Major Beatty to stop work so soon as the funds already placed at his disposal, and the sum of Rupees 5800 which will now be made available from the Budget provision of Rupees 11960 reserved to Government, shall have been exhausted.

Wy. 7/12/74

2. There not being in the Budget provision under Tools and Plant for this year, nearly enough money to meet this exceptional demand, application will be made to the Government of India for an additional sum of Rupees 15000, and in anticipation of the receipt of sanction the District Engineer will be authorized to proceed with the more emergent repairs, it being evident that, if any further delay be allowed to occur, much

L. 0. S

17. 12

much of the floating plant will become absolutely unserviceable, thereby occasioning grave inconvenience, which must be avoided if possible. These Proceedings will be forwarded to the Government of India in support of the application, and it will be pointed out that the unsatisfactory state of this plant has engaged attention for the last 4 years nearly, but that, until a change was recently made in the administration of the District, the instructions given on the subject were not properly attended to, and it could not be dealt with effectively, neither could the requisite provision of funds be made in the Budget in

in the absence of definite information as to what was really required.

Lt. 7/12/74

Sd? suggest the first line not the very recently been in a position to attend to Rivers

to the Chief Engr for Irrigation Work on Godavery
to Controller of P.W. A.
to the D.C. Godavery
Secs Dept 29-12-74

Secs Dept 12th Decr 1874

Irrigation No 3621 Public Works Department

Proceedings of the Madras Government

Read the following

From The Chief Engineer for Irrigation } H.E. No 899C of 3rd Novr 1874.

G.O. No. 3621 of 29th December 1874.

The requirements of the Irrigation floating Plant of the Godavery Delta have been carefully gone into by the District Engineer and Range officer, and it has been shown that Rupees 33,331 are needed for ordinary and special repairs during the current year and Rupees 43,208 in 1875-76. These figures are quite sufficient to show that the plant, the value of which is believed to be about 4 lakhs of Rupees had deteriorated and that

that it was necessary that a thorough examination should be made and energetic measures adopted for its restoration to a condition of efficiency. Major Beatty has fully appreciated this necessity, and considerable progress has already been made in carrying out the more emergent work found to be requisite.

2. There not being, in the Budget provision under Tools and Plant for this year nearly enough money to meet this exceptional demand, Rupees 15,000 will, subject to the approval of the Government of India, be transferred from Repairs Agricultural, and this sum together with the balance× at the disposal of Government under Tools and Plant, Repairs will be made

× Rupees 5,804

at once available for the further prosecution of the work to be undertaken this year.

3. Separate orders will be passed on the non-irrigation floating plant attached to the Godavery District. The steamer Prince will be omitted from the list of irrigation plant, to which it appears not properly to belong.

4. Adequate provision as already directed will be made in the Budget of 1875-76 for the funds required in that year for completing the special repairs of the floating plant and for ordinary repairs also.

5. On the whole the Government consider that

will be desirable to preserve
steel barges belonging to the
Savery river navigation
service
that ~~shall~~ exclusively.

My. 5/11/74.

Genl.

Mr. Hall J. D. Smith C.S.A.
C.S.A. Pike Arkansas

Quartermaster Army
Pike
Little Rock

6/12 Wm

494-496

Rec. 11-12-74.
C. 24-11-74 [illegible]
[illegible]

7113

Govt. of 1874 Madras.

PUBLIC WORKS.

☆

The Chief Engineer

Dated

Rec'd. Encl. 4

G. O. 29 Dec. 1875, No. 3621

Nos. 454456.

Floating Plant - Godavery

Application to
made to the Govt of
for an additional sum
Rs. 15,000, and in
anticipation of the receipt
of sanction, authority
granted for the more
urgent repairs to
be proceeded with