

**PUBLIC WORKS (INDIA).**

A RETURN of all Sums spent on PUBLIC WORKS (not of a Military kind) in India, since April 1834, keeping distinct the Amounts spent on the REPAIRS of OLD, and on the CONSTRUCTION of NEW WORKS, together with the Objects of the Works newly Constructed; and stating, when remunerative, the Amounts received from such Works.

(Mr. Bright.)

Ordered, by The House of Commons, to be Printed,  
20 August 1853.

[Price 1s. 10d.]

EAST INDIA.

RETURN to an Order of the Honourable The House of Commons,  
dated 21 February 1854 *—fer*,

A STATEMENT showing the Quantity of LAND under CULTIVATION in each of the Districts of the Madras Presidency, distinguishing the Quantity in Acres or Cawnies, of LAND IRRIGATED, with the Amount in Rupees of the Government Assessment rated thereon, and the Quantity of Land in Acres or Cawnies, under DRY CULTIVATION, with the Amount of Government Assessment rated thereon; the TOTAL LAND REVENUE in each District, Gross and Net, and the TOTAL AREA of each District in Acres or Cawnies, which are Barren, not Cultivated, or Alienated in Easum; also, an ABSTRACT of the TOTAL AREA, in Acres or Cawnies, in the several Districts of the Madras Presidency, comprising Cultivated and Uncultivated Lands:—

And, COPIES of all APPLICATIONS from the Government of Madras to the Government of India, and to the Honourable Court of Directors, during the Seven Years from 1847 to 1853, both inclusive, for Sanction for Expenditure for PUBLIC WORKS connected with the Improvement of the Country, or connected with the Revenue, Works, or Works of Irrigation, or for Works on which the Cultivation of the Country depends; together with Copies of the REPLIES and LETTERS from the Honourable Court of Directors and Government of India to the Government of Madras to such Applications, during the Seven Years from 1847 to 1853, both inclusive."

East India House,  
8 May 1854.

JAMES C. MELVILL,  
Secretary.

(Mr. Hume.)

Ordered, by The House of Commons, to be Printed,  
8, & 10 May 1854.

## LIST.

	Page
Statement of the Quantity of Land under Cultivation in each of the Districts of the Madras Presidency, distinguishing the Quantity of Land Irrigated and the Quantity under Dry Cultivation; Amount of Government Assessment; Total Land Revenue; and Total Area of each District Barren, not Cultivated, or alienated in Enam	1

### Godavery Annicut, and connecting Channels of Irrigation :

Letter from Government of Madras to Court of Directors; dated 15 May (No. 29) 1847	2
Letter from Government of Madras to Government of India; dated 9 February (No. 186 A.) 1847	3
Letter from Government of Madras to Government of India; dated 6 August (No. 883) 1847	3
Letter from Government of India to Government of Madras; dated 28 August (No. 787) 1847	4
Letter from Government of Madras to Court of Directors; dated 16 April (No. 32) 1848	4
Letter from Government of Madras to Court of Directors; dated 8 July (No. 47) 1848	4
Letter from Government of Madras to Government of India; dated 8 July (No. 732 A.) 1848	6
Letter from Government of India to Government of Madras; dated 6 August (No. 615) 1848	7
Letter from Court of Directors to Government of Madras; dated 20 September (No. 16) 1848	7
Letter from Government of Madras to Court of Directors; dated 12 September (No. 66) 1848	8
Letter from Government of Madras to Government of India; dated 29 August (No. 941) 1848	9
Letter from Government of Madras to Court of Directors; dated 20 November (No. 83) 1848	9
Letter from Government of India to Government of Madras; dated 16 September (No. 719) 1848	10
Letter from Court of Directors to Government of Madras (Extract); dated 22 August (No. 9) 1849	10
Letter from Government of Madras to Court of Directors; dated 13 February (No. 8) 1849	10
Letter from Government of Madras to Government of India; dated 13 February (No. 146) 1849	12
Letter from Government of India to Government of Madras; dated 8 March (No. 150) 1849	13
Letter from Court of Directors to Government of Madras; dated 18 July (No. 6) 1849	13
Letter from Government of Madras to Court of Directors; dated 23 January (No. 6) 1850, and Minutes enclosed	15
Letter from Government of Madras to Court of Directors (Extract); dated 6 June (No. 30) 1850	17
Letter from Government of Madras to Government of India; dated 11 October (No. 972) 1849	17
Letter from Government of India to Government of Madras; dated 23 November (No. 803) 1849	18
Letter from Government of Madras to Court of Directors (Extract); dated 12 February (No. 9) 1851	18
Letter from Government of Madras to Government of India; dated 8 February (No. 123) 1851, with enclosed Minutes and Note by Chief Secretary	19
Letter from Government of Madras to Court of Directors (Extract); dated 25 October (No. 60) 1851	21
Letter from Government of Madras to Government of India; dated 6 March (No. 226) 1851	22
Resolution of Government of India, &c.; dated 11 April (No. 551) 1851	23
Resolution of Government of Madras; dated 6 May (No. 434) 1851	23

	Page
Letter from Government of Madras to Court of Directors (Extract); dated 7 June (No. 27) 1852	24
Letter from Government of Madras to Government of India; dated 9 December (No. 1,220) 1851, Minutes of Government and Note by Chief Secretary enclosed	25
Resolution of Government of India; dated 4 February (No. 304) 1852	26
Resolution of Government of Madras; dated 13 March (No. 246) 1852	27
Letter from Government of Madras to Government of India; dated 28 February (No. 196) 1852	28
Resolution of Government of India; dated 30 April (No. 856) 1852	28
Letter from Government of Madras to Government of India; dated 24 February (No. 176) 1852	29
Resolution of Government of India; dated 2 April (No. 578) 1852	29
Resolution of Government of Madras; dated 27 April (No. 388) 1852	30
Letter from Government of Madras to Court of Directors (Extract); dated 22 February (No. 13) 1853	30
Letter from Government of Madras to Court of Directors (Extract); dated 24 June (No. 34) 1853	31
Letter from Government of Madras to Government of India; dated 24 March (No. 340) 1853	32
Letter from Government of Madras to Government of India; dated 14 May (No. 536) 1853	33

#### Trivady Annicut, across the Guddalum, in South Arcot:

Letter from Government of Madras to Court of Directors (Extract); dated 15 November (No. 54) 1847	33
Letter from Government of Madras to Government of India; dated 11 September (No. 920) 1848	33
Letter from Government of India to Government of Madras; dated 10 October (No. 681) 1848	34
Letter from Government of Madras to Government of India; dated 1 June (No. 588) 1848	34
Letter from Government of Madras to Court of Directors; dated 23 September (No. 72) 1848	34
Letter from Government of India to Government of Madras; dated 17 June (No. 458) 1848	35
Letter from Court of Directors to Government of Madras (Extract); dated 22 August (No. 9) 1849	35

#### Vellaur Annicut:

Letter from Government of Madras to Court of Directors (Extract); dated 28 April (No. 34) 1848	35
Letter from Court of Directors to Government of Madras (Extract); dated 22 August (No. 9) 1849	35

#### Dams across the Heads of the Cauvery and Vennaar:

Letter from Government of Madras to Court of Directors (Extract); dated 20 November (No. 83) 1848	36
Letter from Government of Madras to Government of India; dated 17 August (No. 866) 1848	36
Letter from Government of India to Government of Madras; dated 16 September (No. 720) 1848	37
Letter from Court of Directors to Government of Madras (Extract); dated 22 August (No. 9) 1849	37

#### Kistna Annicut at Bezoarah:

Letter from Government of Madras to Court of Directors (Extract); dated 20 November (No. 83) 1848	37
Letter from Court of Directors to Government of Madras (Extract); dated 22 August (No. 9) 1849	38

Letter from Government of Madras to Court of Directors; dated 20 July (No. 37) 1849	Page 28
Letter from Government of Madras to Government of India; dated 30 July (No. 681) 1849, Minutes enclosed	30
Letter from Court of Directors to Government of Madras; dated 9 January (No. 1) 1851	42

#### Annicut serving as a Bridge across the Pennaar:

Letter from Government of Madras to Government of India; dated 27 May (No. 497) 1851	44
Resolution of Government of India; dated 18 July (No. 1,207) 1851	44
Letter from Court of Directors to Government of Madras; dated 18 February (No. 2) 1852	45

#### Cheysar Annicut, in North Arcot:

Letter from Government of Madras to Court of Directors; dated 25 June (No. 80) 1851	45
Letter from Government of Madras to Government of India; dated 7 December (No. 1,160) 1850	46
Resolution of Government of India; dated 14 March (No. 367) 1851	46
Letter from Government of Madras to Government of India; dated 18 June (No. 567) 1851	47
Letter from Government of Madras to Court of Directors; dated 19 November (No. 9) 1851	48

#### Dam at Chutwye:

Letter from Government of Madras to Court of Directors; dated 19 September (No. 53) 1851	48
Letter from Government of Madras to Court of Directors; dated 23 June (No. 80) 1852, and Minutes enclosed	49
Letter from Court of Directors to Government of Madras; dated 15 December (No. 10) 1852	50

#### Pular Annicut:

Letter from Government of Madras to Court of Directors; dated 23 September (No. 61) 1852	51
Letter from Government of Madras to Government of India; dated 18 September (No. 1,047) 1852, and Minutes enclosed, with Note by Chief Secretary	52

#### Calicut Canal, Agoombie Ghaut:

Letter from Government of Madras to Court of Directors; dated 17 May (No. 2) 1847	53
Letter from Court of Directors to Government of Madras (Extract); dated 21 May (No. 12) 1848	59
Letter from Government of Madras to Government of India; dated 2 November (No. 222) 1849	59
Letter from Government of India to Government of Madras; dated 23 November (No. 825) 1849	59
Letter from Government of Madras to Government of India; dated 6 April (No. 68) 1850	59

#### Road from Bellary to Dharwar:

Letter from Government of Madras to Court of Directors (Extract); dated 19 September (No. 6) 1851	60
Letter from Government of Madras to Court of Directors (Extract); dated 6 August (No. 9) 1852	60
Letter from Government of Madras to Government of India; dated 24 December 1850	61
Letter from Government of India to Government of Madras; dated 21 January (No. 60) 1851	61
Letter from Government of Madras to Government of India; dated 21 July 1851	61

Bridge over the Cooum :

Letter from Government of Madras to Court of Directors, dated 12 October (No. 81) 1847	00
Letter from Court of Directors to Government of Madras (Eastw); dated 18 February (No. 2) 1848	00
Letter from Government of Madras to Government of India; dated 28 June (No. 88) 1847	00
Letter from Government of India to Government of Madras; dated 17 July (No. 684) 1847	00
Letter from Government of India to Government of Madras; dated 31 August (No. 675) 1847	00

Bridges over the Coddembella Holla and Cabbintial Holla.

Letter from Government of Madras to Court of Directors; dated 18 December (No. 8) 1848	00
--	----

Devamany Ghant:

Letter from Government of Madras to Court of Directors; dated 26 August (No. 10) 1847	00
Letter from Government of Madras to Court of Directors (Eastw); dated 20 December (No. 12) 1847	04
Letter from Court of Directors to Government of Madras (Eastw); dated 28 August (No. 14) 1848	04
Letter from Government of Madras to Government of India; dated 26 August (No. 100) 1847	04
Letter from Government of Madras to Government of India; dated 7 September (No. 100) 1847	04
Letter from Government of India to Government of Madras; dated 18 September (No. 817) 1847	06
Letter from Government of India to Government of Madras; dated 26 September (No. 861) 1847	05
Letter from Government of India to Government of Madras; dated 6 December (No. 1,100) 1847	06

Road from Madras to Vicravandy:

Letter from Government of Madras to Government of India; dated 26 January (No. 10) 1847	00
---	----

Road from Mercara to Veerajenderpetti:

Letter from Government of Madras to Court of Directors (Eastw); dated 26 September (No. 11) 1848	06
Letter from Government of India to Government of Madras; dated 6 April (No. 671) 1848	07

Roads in Tutlacoria:

Letter from Government of Madras to Court of Directors (Eastw); dated 16 December (No. 6) 1848	07
Letter from Government of Madras to Government of India; dated 7 August (No. 155) 1848	08

Toongabedra Channel:

Letter from Government of Madras to Government of India; dated 27 February (No. 200) 1848	00
Letter from Government of India to Government of Madras; dated 17 March (No. 207) 1848	00

---

Cochrane's Canal:

	Page
Letter from Government of Madras to Court of Directors; dated 24 January (No. 2) 1849	69
Letter from Government of Madras to Court of Directors (Extract); dated 6 June (No. 30) 1850	70
Letter from Government of Madras to Court of Directors (Extract); dated 4 July (No. 33) 1851	70
Letter from Government of Madras to Court of Directors (Extract); dated 3 June (No. 35) 1852	71
Letter from Government of India to Government of Madras; dated 21 April (No. 304) 1849	71
Letter from Government of Madras to Government of India; dated 5 October (No. 951) 1849	72
Letter from Government of India to Government of Madras; dated 20 September (No. 586) 1850	72
Letter from Government of Madras to Government of India; dated 28 June (No. 634) 1850	73

---

East India House,  
6 May 1854. }

T. L. Peacock,  
Examiner of India Correspondence.

---

STATEMENT showing the Quantity of LAND under CULTIVATION in each of the Districts of the Madras Presidency, distinguishing the Quantity, in Acres or Cawnies, of LAND IRRIGATED, with the Amount in Rupees of the Government Assessment rated thereon; and the Quantity of Land, in Acres or Cawnies, under DRY CULTIVATION, with the Amount of Government Assessment rated thereon; the TOTAL LAND REVENUE in each District, Gross and Net; and the TOTAL AREA of each District, in Acres or Cawnies, which are Barren, not Cultivated or Alienated in *Enaam*; also, an ABSTRACT of the TOTAL AREA, in Acres or Cawnies, in the several Districts of the Madras Presidency, comprising Cultivated and Uncultivated Lands.

DISTRICTS.	IRRIGATED LAND.		DRY CULTIVATION.		TOTAL CULTIVATED LAND.		7. TOTAL LAND REVENUE.	8. BARREN LAND.	9. UNCULTI- VATED LAND.	10. LAND ALIENATED IN ENAM.	11. TOTAL AREA, Cultivated and Uncultivated.
	1. Quantity.	2. Assessment thereon.	3. Quantity.	4. Assessment thereon.	5. Quantity.	6. Assessment thereon.					
	Acres.	Rupees.	Acres.	Rupees.	Acres.	Rupees.	Rupees.	Acres.	Acres.	Acres.	Acres.
Ganjam	107,454	cannot be given	53,908	cannot be given	161,362	3,77,378	9,93,777				4,096,000
Vizagapam	19,240	ditto	19,750	ditto	29,990	2,20,003	12,37,289				4,896,000
Rajahmundry	87,757	4,49,987	187,328	8,83,403	275,085	13,33,390	19,91,485				3,972,000
Masulipatam	163,354	cannot be given	387,752	cannot be given	551,106	4,33,724	9,49,304				3,200,000
Guntoor	31,216	1,98,987	659,304	9,78,467	690,520	11,77,454	14,03,059				3,174,000
Chingleput	138,432	7,03,806	65,420	1,13,787	203,852	8,17,663	9,22,993				1,915,520
Salem	75,714	4,89,544	614,430	8,33,566	690,144	13,23,110	17,75,319				5,248,000
Madura	136,959	6,84,337	356,940	5,14,130	493,899	11,78,467	19,40,843				6,848,000
Nellore	143,768	9,56,390	225,150	2,29,010	368,918	11,65,400	18,82,107				5,075,200
North Arcot	154,854	13,21,812	238,325	4,98,663	393,179	18,20,475	20,84,220				3,705,600
South Arcot	158,338	11,70,056	407,617	12,47,246	625,955	24,17,302	23,40,221				4,664,000
Tanjore	713,913	33,48,603	169,084	1,97,109	882,997	35,45,712	39,20,032				2,496,000
Trichinopoly	97,258	9,13,266	233,485	5,47,666	330,743	14,60,932	14,20,091				2,075,520
Tinnevely	190,814	13,09,857	543,055	4,18,827	733,869	17,28,684	20,24,608				3,648,000
Bellary	149,515	13,48,288	1,782,562	14,69,247	1,932,077	28,12,535	22,43,162				3,355,840
Cuddapah	181,637	14,45,286	1,147,990	11,82,200	1,299,627	26,27,486	21,89,541				3,200,800
Coimbatore	70,707	5,25,661	1,527,867	16,47,603	1,598,574	21,73,264	23,48,861				5,299,200
Canara			cannot be given				19,04,731				4,840,800
Malabar	84,811	5,13,942	2,070,119	11,30,897	3,064,730	10,44,839	16,45,171				3,878,400
Madras	2,842	11,338			2,842	11,338	65,936				17,280
Kurnool	11,913	1,04,282	475,706	5,58,411	487,619	6,62,693	7,22,882				1,891,520
<b>TOTAL</b>	<b>2,690,206</b>	<b>1,54,70,532</b>	<b>12,116,792</b>	<b>1,24,50,232</b>	<b>14,807,088</b>	<b>2,89,51,869</b>	<b>3,59,45,632</b>				<b>67,598,080</b>



COPIES of all APPLICATIONS from the Government of *Madras* to the Government of *India*, and to the Honourable Court of Directors, during the Seven Years from 1847 to 1853, both inclusive, for Sanction for Expenditure for PUBLIC WORKS connected with the Improvement of the Country, or connected with the Revenue, Works or Works of Irrigation, or for Works on which the Cultivation of the Country depends; together with Copies of the REPLIES and LETTERS from the Honourable Court of Directors and Government of *India* to the Government of *Madras* to such Applications, during the Seven Years from 1847 to 1853, both inclusive,

Godavery Annicut.

Godavery Annicut, and connecting Channels of Irrigation,

Revenue Department, 15 May (No. 29) 1847.

To the Honourable the Court of Directors of the East India Company.

Honourable Sirs,

Para. WE have the honour to acknowledge the receipt of your letter in this department, dated 23d December 1846, No. 19, conveying sanction for the estimated expenditure of 4,75,752 rupees for the construction of an annicut across the Godavery River, in the Rajahmundry district.

Cons. 9 Feb. 1847,  
No. 7, 8.

2. We communicated this despatch to the Board of Public Works, and desired them to issue the necessary instructions to the local revenue and engineer officers of the district for carrying the work into execution, and we at the same time furnished a copy to the Government of India.

\* See below.

3. We take this opportunity to submit copy of the correspondence recorded in the Consultations noted in the margin,\* which will acquaint your Honourable Court of the further proceedings and arrangements authorized by us, connected with the works of the Godavery Annicut.

4. It will be observed, that we authorized a disbursement of 5,000 rupees for the purchase of timber on account of the annicut and its dependent works; of 1,800 rupees for the construction of flat-bottom boats for the transport of materials; of 5,410 rupees for the construction of a railway for the purpose of carrying stone from the quarry near Dhoulaiswarum to the banks of the river; and of 4,500 rupees for the provision of cut-stone; and that it is proposed further to establish a workshop in the district, and to obtain a steam tug-boat. The zillah surgeon of Rajahmundry has also been placed in medical charge of the civil engineers' establishment; and the large bodies of labourers employed on the annicut with the usual allowance of 40 rupees per mensem.

Rev. Cons. 5 May  
1846, No. 4, 5;  
2 June, 1846, Nos.  
3, 4; 7 July 1846,  
Nos. 39, 40; April  
1847.

5. In connexion with the arrangements for improving the irrigation of the Rajahmundry district, reported in the concluding para. of our revenue letter, No. 22, dated 14th April 1846, we now forward a copy of a correspondence with the Board of Public Works, from which it will be seen, that the cost of the Samulcottah or Thooliah Bagah Channel is likely to exceed the estimate by 2,000 rupees, and that under the explanation furnished in a recent letter, of the advantage already derived from the channel, and of the necessity, in order to bring it into full operation for the construction of sluices, we authorized a disbursement of 5,419 rupees for that purpose, recommended by the Board of Revenue.

\* Revenue Diary, 4 Aug. 1846, No. 24, 25; Public Works, 15 Sept. 1846, No. 3, 4; Revenue, 6 Oct. 1846, No. 43 to 45; Revenue, 24 Nov. 1846, No. 11, 12; Revenue, 1 Dec. 1846, No. 14, 15; Revenue, 22 Dec. 1846, No. 21, 22, 57 to 60; Revenue, 12 Jan., 1847, No. 55, 56; Public Works, 9 Feb. 1847, No. 11, 12; Revenue, 23 Feb. 1847, No. 48, 49; Revenue, 9 March 1847, No. 10, 11; Revenue, 23 March 1847; Revenue, 13 April 1847; April 1847.

FOR PUBLIC WORKS IN MADRAS, 1847 to 1853.

Revenue. There was also under our consideration a proposition of the civil engineer, to employ the labouring classes on public works, with the view of alleviating the distress from an apprehended scarcity; but the necessity has passed away, and rendered unnecessary the measures authorized by us on that account.

We have, &c.  
(signed) Tweeddale.  
H. Chamier.  
J. Dickinson.

Revenue Department, No. 186 A.

From Sir *H. C. Montgomery*, Bart., Officiating Secretary to the Government of Fort St. George, to *G. A. Bushby*, Esq., Secretary to the Government of India.

Sir,

I AM directed by the Most Noble the Governor in Council to transmit, for the information of the Government of India, copy of a despatch in the Revenue Department from the Honourable Court of Directors, dated 23d December 1846, No. 19, sanctioning an expenditure of 4,75,752 rupees, for the construction of an annicut across the Godavery River, for the improvement of the irrigation of the Rajahmundry district, and to intimate that orders have been issued by this Government for carrying the work into execution.

2. I am desired at the same time to acknowledge the receipt of your letter, dated the 18th July 1846, No. 457; and to state that the Board of Revenue in the Department of Public Works have been instructed to refer the observations of the Government of India on the proposed dike and sluices, along the Godavery, and on the embankment of rivers generally, for the report of the civil engineer under this Presidency, and to submit the same with their own opinion on this important question. On this portion of the subject the Government propose to address the Government of India separately on the receipt of a reply from the Board of Revenue.

(signed) *H. C. Montgomery*,  
Officiating Secretary to Government.

Fort St. George,  
9 February 1847.

Revenue Department, No. 883.

From Sir *H. C. Montgomery*, Bart., Secretary to the Government of Fort St. George, to *G. A. Bushby*, Esq., Secretary to the Government of India.

Sir,

I AM directed by the Most Noble the Governor in Council to acknowledge the receipt of your letter, dated 18th July 1846, No. 457, and, with reference to the inquiry directed to be made in para. 3, to request you will submit for the consideration of the Government of India the correspondence with the Board of Revenue in the Department of Public Works noted in the margin,\* giving cover to reports from the engineer officers of the Madras Presidency experienced in the management of rivers, upon the subject of river embankments.

\* See below.

2. With reference to what has been urged in respect of the Godavery, his Lordship in Council requests that the estimate for Rs. 34,994. 10. 11., for a dike with sluices along the eastern bank of that river, may now receive the sanction of the Government of India.

3. He desires also to recommend that the request preferred by the Board in para. 53 of their letter, dated 1st July 1847, No. 545, "for a description of the Bengal rivers and of the country through which they flow, and their embankments,

\* From Board of Revenue, Department Public Works, 3 December 1846, No. 890, with two Enclosures; Extract Minutes of Consultations, 30 January 1847, No. 143; from Board of Revenue, Department Public Works, 1 July 1847, No. 545, with 12 Enclosures.

## CORRESPONDENCE RELATIVE TO EXPENDITURE

Godavery Annicut. ments, together with any observations and reports that have been already made upon them," may be complied with.

Fort St. George,  
6 August 1847.

I have, &c.  
(signed) *H. C. Montgomery,*  
Secretary to Government.

No. 28.

No. 787.

From *G. A. Bushby*, Esq., Secretary to the Government of India, to Sir *H. C. Montgomery*, Bart., Secretary to the Government of Fort St. George.

Sir,

I AM directed to acknowledge the receipt of your letter, No. 883, dated the 6th instant, with enclosures, and, in reply, to state, that, in compliance with the strong recommendation of the Most Noble the Governor in Council, the President in Council sanctions the construction of a dike with sluices along the eastern bank of the Godavery River, at an estimated cost of Rs. 34,994. 10. 11.

2. The Government of Bengal have this day been called on to furnish the information required in the 3d para. of your letter, which will be communicated to you when received.

Fort William,  
28 August 1847.

I have, &c.  
(signed) *G. A. Bushby,*  
Secretary to Government of India.

Revenue Department, 26 April (No. 32) 1848.

To the Honourable the Court of Directors of the East India Company.

Honourable Sirs,

Cons. 15 Apr. 1848.

WE have the honour to transmit, in continuation of paras. 2 and 3 of our letter in this department, dated 14th January 1848, No. 12, copy of a communication from the Board of Revenue, giving cover to one from the civil engineer, 1st division, reporting upon the progress of the Godavery Annicut, and its probable ultimate cost.

2. Referring your Honourable Court to the report itself for particular information of the extent of the progress made in this important undertaking to the present period, we have only to observe, that we have recorded our approbation of the exertions of Major Cotton and his subordinates.

Fort St. George,  
26 April 1848.

We have, &c.  
(signed) *Henry Pottinger.*  
*G. J. F. Berkeley.*  
*H. Dickinson.*  
*D. Elliott.*

Fort St. George, Revenue Department, 8 July (No. 47) 1848.

To the Honourable the Court of Directors of the East India Company.

Honourable Sirs,

Dated 15 June  
1848, No. 436.

Para. 1. WE have the honour to transmit, in continuation of our letter in this department, dated 26 April 1848, No. 32, copy of a letter from the Board of Revenue in the Department of Public Works, giving cover to a further report from Major Cotton, civil engineer of the 1st division, on the progress of the works of the Godavery Annicut, in the Rajahmundry district, together with an extract from the Minutes of Consultation of this day's date, in which we have recorded our views on the subject at full length.

2. Your Honourable Court will, especially after our letter of the above date, No. 32, learn, with equal deep regret to that which we feel in communicating it, from these papers, that the large sum sanctioned for the construction of the Godavery Annicut has already been expended, and that a further demand of

139,100

FOR PUBLIC WORKS IN MADRAS, 1847 TO 1853.

5

139,100 rupees is now made upon the treasury. By the report of Major Cotton, which we regard as far from satisfactory as an explanation of the causes of the expenditure so greatly exceeding the estimate, the works appear less than half finished, and by no means proportionate to the expenditure. They are not, we fear, even placed in a condition of security against the effects of the heavy freshes of the season; indeed, we have since received intimation of a breach in one branch of the work.

Godavery Annicut.

3. We agree in the opinion of the Board of Revenue, that the civil engineer has not sufficient data, in the present state of the works, for estimating the ultimate expenditure, and we are inclined to believe that a larger sum than that now estimated will be required to bring them to completion. We have desired the Board to obtain from the civil engineer, as soon as the state of the river will admit, a detailed and accurate account of the work yet to be performed, inclusive of the repair of the damages that may be sustained by the freshes, with an estimate of the probable cost, and have further instructed them to subject the same to the closest scrutiny in their office, and to submit it for our orders as soon after as practicable.

From Board of Revenue, 3 July 1848, No. 466.

4. As the full operations of the annicut cannot be resumed till the end of November, thus admitting of the receipt of your instructions without hindrance to the work, we have resolved at once to submit the correspondence for the information of your Honourable Court, and we now solicit your orders, for our guidance, at the earliest possible period. In the meantime, as some outlay is indispensable, not only for the preservation of the works, but for carrying on such as are absolutely required, we have incurred the responsibility of sanctioning a sum of 20,000 rupees, recommended by the Board for these purposes. We have, however, directed the Board to be careful that no further work is undertaken that is not absolutely required, and that the establishment and workmen are reduced as far as possible pending the receipt of your Honourable Court's instructions.

5. We fully concur in the soundness of the opinion given by the Board in the 15th para. of their letter, and have expressed much regret that Major Cotton's zeal and great anxiety to bring the expected advantages of the annicut into early operation should in the last few months have tempted him to incur the extravagant expenditure of the public money now reported, for which we were unable to admit a valid excuse in the difficulties he had to contend against, or in the novelty of the arrangements, and the magnitude of the work, the extenuating circumstances advanced by the Board in his behalf.

6. We hope, however, that the completion of the work will yet be effected, though at an additional considerable outlay, and that it will speedily repay the large expenditure by a rapid increase of the public revenue; and if your Honourable Court be pleased to sanction the further sum that may become requisite, and which we beg to recommend, we pledge ourselves not to give effect to the sanction until we are fully satisfied that our doing so will secure the desired end beyond the chance of failure, of which the condition of the annicut after the rains will afford us ample opportunity to judge.

7. We have desired to be periodically informed of the state of the works during the freshes, and have informed the Board that we depend on their giving their constant and earnest attention to the subject.

8. We take this opportunity to report, that on the 26th April last we sanctioned an estimate, amounting to Rs. 9,966. 2. 1., for the construction of locks and calingulahs, for the improvement of the irrigation and navigation of the Thooliah Bagah Channel, and that on the 6th June we authorized an advance of 5,000 rupees for opening a portion of the main channel of irrigation leading from the Godavery Annicut down the central tract of the Delta.

Diary, 2 May 1848, Nos. 42, 43, Cons. 6 June, No. 630.

We have, &c.  
(signed) Henry Pottinger.  
G. F. Berkeley.  
D. Elliott.

Fort St. George,  
8 July 1848.

Godavery Annicut.

EXTRACT Fort St. George Revenue Consultations, July (No. 732 A.) 1848.

From *H. C. Montgomery*, Secretary to Government, Fort St. George, to  
*G. A. Bushby*, Esq., Secretary to the Government of India.

No. 26.

Sir,

From Board of  
Revenue, dated  
15 June 1848,  
No. 436.

WITH reference to my letter in this department, dated 9th February 1847, No. 186, I am directed by the Right honourable the Governor in Council to request you will submit for the information of the Government of India the accompanying copy of one from the Board of Revenue in the Department of Public Works, with the two original communications received with them from the civil engineer of the first division, reporting on the progress of the Godavery Annicut, and the further expenditure required on account of that work.

2. An extract from the Minutes of Consultation, dated 8th July, also accompanies; and the Governor in Council trusts that the proceedings of this Government in respect of the Godavery Annicut, as therein detailed, will, under the exigencies of the case, meet with the approval of the Right honourable the Governor-general of India in Council.

3. I am desired to add, that a communication on the subject has also been made to the Honourable the Court of Directors.

(signed) *H. C. Montgomery*,  
Secretary to Government.

Fort St. George, 8 July 1848.

EXTRACT Fort St. George Revenue Consultations, July (No. 732) 1848.

No. 25.

15 June.  
From Board of  
Revenue, 3 July  
1848, No. 466.

Para. 1. The Right honourable the Governor in Council regrets, exceedingly to learn from the foregoing report from the Board of Revenue, that the large sum sanctioned for the construction of the Godavery Annicut has already been expended, and that a further demand of 1,39,100 rupees is now made upon the treasury. By the report of Major Cotton, which the Governor in Council observes is far from satisfactory, as an explanation of the causes of the expenditure so greatly exceeding the estimates, it would appear that the works are even less than half finished, and by no means proportionate to the expenditure; and he regrets particularly to notice, that they are not even placed in a condition of security against the effects of the heavy freshes of the season; indeed, since the date of the Board's report, intimation has been received of a breach in the Madoor branch of the work.

2. The Governor in Council fully agrees with the Board in the opinion expressed in the 12th para. of their secretary's letter, that the civil engineer has not sufficient data in the present state of the works for estimating the ultimate expenditure, and he is inclined to the belief that a larger sum even than that he has now estimated will be required to bring the works to completion: He desires the Board will obtain from the civil engineer, as soon as the state of the river will admit, a detailed and accurate account of the work yet to be performed, inclusive of the repair of the damages sustained by the freshes, with an estimate of the probable cost, which they will subject to the closest scrutiny in their office, and submit for the orders of Government as soon after as practicable.

3. The Right honourable the Governor in Council has ascertained that the full operations of the annicut cannot be resumed till the end of November, thus admitting of the receipts of the instructions of the Honourable Court of Directors, without hindrance to the work, and he resolves, by the earliest opportunity, to submit the correspondence which has passed since the last despatch of this Government, under date 26th April 1848, for the information and orders of the Honourable Court. In the meantime some outlay is, it appears, indispensable for the preservation of the works, and for carrying on such as are absolutely required; and for these purposes he resolves to incur the responsibility of sanctioning the sum of 20,000 rupees, as recommended by the Board. The Governor in Council, however, directs that the Board will see that no further work is undertaken that is not absolutely required, and that the establishment and workmen are reduced as far as possible pending the receipt of the Honourable Court's instructions.

4. The Governor in Council fully concurs in the soundness of the opinion given by the Board, in the 15th para. of their secretary's letter. It is much to be regretted that Major Cotton's zeal and great anxiety to bring the expected advantages of the annicut into early operations, should in the last few months have tempted him to incur the extravagant expenditure of the public money  
now

now reported, and for which the Government are unable to admit a valid excuse in Godavery Annicut. the difficulties he had to contend against, or the novelty of the arrangements, and the magnitude of the work, the extenuating circumstances which the Board advance in his behalf.

5. The Government desire to be periodically informed of the state of the works during the freshes, and depend on the Board giving their constant and earnest attention to this subject.

(No. 615.)

From *G. A. Bushby*, Esq., Secretary to the Government of India, to *Sir H. C. Montgomery*, Bart.; Secretary to Government, Fort St. George.

Sir,

I AM directed to acknowledge the receipt of your letter, No. 732 A., dated the 8th ultimo, with enclosures, relative to the progress of the Godavery Annicut, and the further expenditure required for its completion, and, in reply, to state, that the Governor-general in Council, pending a reply from the Honourable Court to the reference made by the Government of Fort St. George, confirms the authority granted by the Right honourable the Governor in Council for the disbursement of a sum not exceeding 20,000 rupees for the prosecution of such works as are absolutely necessary for the preservation of what has already been done.

(signed) *G. A. Bushby*,  
Secretary to the Government of India.

Fort William, 5 August 1848.

Revenue Department, 20 September (No. 15) 1848.

Our Governor in Council at Fort St. George.

Para. 1. THE letters of the dates referred to in the margin\* report the progress which has been made in the construction of the Godavery Annicut. \* See below.

2. We have perused with equal surprise and disappointment your letter of the 8th July last (No. 47), in which you inform us that the whole of the amount sanctioned (4,75,752 rupees) has been already expended, and that a supplementary estimate of 1,39,100 rupees has been sent in by Major Cotton; that the works appear to be less than half finished, and not even placed in a condition of security against the effects of the heavy freshes of the season; and that you are inclined to believe that a larger sum than that now estimated will be required to bring them to completion.

3. Under these circumstances, and considering that the full operations of the work cannot be resumed until the end of November, you have resolved to await our instructions, having in the meantime sanctioned an expenditure of 20,000 rupees, which is stated to be indispensable not only for the preservation of the works, but for carrying on such as are absolutely required.

4. We fully agree in the opinion expressed by you, that the explanation given of the causes of the expenditure so greatly exceeding the estimate is far from satisfactory. We cannot but think that the over-anxiety of Major Cotton to complete the work in the shortest possible time has led him to disregard considerations of economy, and even of security to the work itself; and we concur in the remark of the Board of Revenue, that "regular and safe measures are greatly to be preferred to much haste in the construction of public works, whatever may be the contingent advantages of the latter; even in the case of the Godavery Annicut, in which those advantages were so highly estimated, they were nothing, in the judgment of the Board, to that of substituting comparative certainty in the execution of the works to considerable risk."

5. In the present state of the works, it is obvious that the large expenditure already incurred will be altogether lost, unless the further amount required to complete them is authorized. We have, therefore, no alternative but to give our sanction to their being proceeded with, in full reliance on the pledge given in your letter,

\* Letter dated 14 January (No. 12) 1848, p. 2 & 3; 26 April (No. 32) 1848; 8 July (No. 47) 1848.

Godavery Anicut. letter, that you will not "give effect to the sanction until you are fully satisfied that your doing so will secure the desired end beyond the chance of failure, of which the condition of the anicut after the rains will afford you ample opportunity to judge."

6. We think it very desirable that, in addition to the scrutiny to which the Board of Revenue have been directed to subject the estimates when sent in by Major Cotton, the work itself should be inspected by one or more experienced engineer officers, who might report to you on its actual condition, and on the plans proposed by Major Cotton to be pursued for completing it, before authorizing any further large disbursement on account of it.

We are, &c.  
(signed) J. L. Lushington,  
A. Galloway, &c. &c.

London, 20 September 1848.

Fort St. George, Revenue Department, 12 September (No. 66) 1848.

To the Honourable the Court of Directors of the East India Company.

Honourable Sirs,

Para. 1. IN continuation of our letter, dated 8th July 1848, No. 47, we have the honour to submit, for the information of your Honourable Court, copies of further communications from the Board of Revenue in the Department of Public Works, on the subject of the works of the Godavery Anicut, in the Rajahmundry district, and of our proceedings thereon.

Dated 10 and 24  
August 1848, Nos.  
600 and 631.  
Government of  
India, 29 August  
1848, No. 641.

2. From these papers it will be seen that a further sum is considered necessary to carry on the works; but as we had already incurred the responsibility of sanctioning an advance on that account of the large amount of 20,000 rupees, a measure that has since met the approval of the Government of India, we were unwilling, notwithstanding the emergency of the case, to permit another advance without the previous concurrence of that Government.

From Government  
of India, 5 August  
1848, No. 615.

3. We accordingly addressed the Government of India on the subject, and observed to them, that unless this great undertaking were abandoned under your Honourable Court's orders, a course which we could not contemplate as probable; we were decidedly of opinion it was advisable, and would be in the end economical, to incur the expenditure applied for of 7,000 rupees monthly, from the 1st October, until the orders of your Honourable Court were received, which we remarked might be looked for by the mail to arrive about the 1st December. We observed that several important objects would be gained, time would be saved, the returns from the influence of the anicut expedited, and the security of the work already performed would be better provided for. The cost of bringing stone for the construction of the dam would be much less by taking advantage of the favourable season, than by postponing that process to a period when water-carriage would be no longer fully available for the transport of this material, and a body of skilled and experienced workmen would be kept together ready for the further operations, who if once dispersed could not be again collected without great difficulty and loss of time.

4. We also pointed out, that, by Major Cotton's calculations, the 20,000 rupees sanctioned by us was intended to provide for the expenditure up to the end of August; whereas, from the reductions effected, there remained on the 15th August a balance sufficient to carry on the works on the present scale throughout all September; that unless a further expenditure were allowed, the work must be completely stopped at the end of this period, probably in some degree endangering it, and that, after a full and careful consideration of these circumstances, we were induced strongly to recommend that authority might be granted to carry on the works on the proposed scale, at a monthly charge of 7,000 rupees, until your Honourable Court's orders were received.

5. As observed to the Government of India, we doubt not that the outlay, judiciously made, as we have reason to hope it will be, will tend considerably to diminish the sum which would otherwise be required to complete the anicut.

We have, &c.  
(signed) H. Pottinger.  
G. F. Berkeley.  
D. Elliott.

Fort St. George,  
12 September 1848.

Revenue Department, No. 941.

Godavery Annicut.

From Sir H. C. Montgomery, Bart., Secretary to the Government of Madras,  
to G. A. Bushby, Esq., Secretary to the Government of India.

Sir,

Para. 1. I HAVE the honour to forward, for the consideration of the Government of India, two communications received from the Board of Revenue, submitting further reports from the officer in charge of the Godavery Annicut.

Dated 10 and 24  
August 1848,  
Nos 600 and 631.

2. From these it will be seen, that a further sum is considered necessary to carry on the works, but as the Right honourable the Governor in Council has already on the 8th July last incurred the responsibility of sanctioning an advance on that account, of the large amount of 20,000 rupees, a measure that has since met the approval of the Supreme Government, he is unwilling, notwithstanding the emergency of the case, to permit another advance for the same object, without the previous concurrence of the Governor-general in Council.

From Government  
of India, 5 August  
1848, No. 615.

3. Unless this great undertaking is abandoned under the orders of the Honourable Court of Directors, a course which the Right honourable the Governor in Council cannot contemplate as probable, he is decidedly of opinion that it is advisable and will be in the end economical to incur the expenditure now applied for of 7,000 rupees monthly, from the 1st October next till the orders of the Honourable Court are received, and which may be looked for by the mail to arrive about the 1st December. Several important objects will be gained, time will be saved, the returns from the influence of the annicut expedited, and the security of the work already performed will be better provided for. The cost of bringing stone for the construction of the dam will be much less by taking advantage of the favourable season, than by postponing that process to a period when water carriage will be no longer fully available for the transport of this material, and a body of skilled and experienced workmen will be kept together, ready for the further operations, who if once dispersed could not be again collected without great difficulty and loss of time.

4. The Governor in Council would point out that, by Major Cotton's calculations, the 20,000 rupees sanctioned on the 8th July, was intended to provide for the expenditure up to the end of August, whereas, from the reductions effected by Captain Orr, there remained on the 15th of August a balance sufficient to carry on the works on the present scale throughout all September. Unless, therefore, a further expenditure is allowed, the work must be completely stopped at the end of this period, probably in some degree endangering it; and under a full and careful consideration of these circumstances, the Right honourable the Governor in Council is induced strongly to recommend that the application of the acting civil engineer be complied with, and that this Government receive authority to carry on the works on the proposed scale, at a monthly charge of 7,000 rupees, till the orders of the Honourable Court be received. The Governor in Council cannot doubt that this outlay, judiciously made, as he has reason to hope it will be by the acting civil engineer, will tend considerably to diminish the sum which will otherwise be required to complete the annicut.

5. The Governor in Council regrets the necessity that has arisen for these unexpected demands on the Supreme Government, and directs me, in conclusion, to solicit the earliest possible reply to the present application.

(signed) H. C. Montgomery,  
Secretary to Government.

Fort St. George, 29 August 1848.

EXTRACT Revenue Letter, from Fort St. George, dated 20 November  
(No. 83) 1848.

14. In continuation of the proceedings reported in our letter of the 12th September last (No. 66), we transmit copy of a further correspondence on the subject of the works of the Godavery Annicut.\* It will be seen that the Government

\* Cons. 19 September 1848, Nos. 36, 37; Cons. 3 October 1848, Nos. 40, 41; Cons. 10 October 1848, Nos. 28 to 33; Cons. 24 October 1848, Nos. 40, 41; Diary, 31 October 1848, Nos. 1 and 2.



Godavery Annicut. ment of India have, upon our representation, sanctioned an expenditure of 7,000 rupees per mensem from the 1st October for the prosecution of the works, until the orders of your Honourable Court are received. By the reports of the acting civil engineer now forwarded, your Honourable Court will learn that the works have sustained but little damage from the effects of the first freshes.

EXTRACT Fort St. George Revenue Consultation, 3 October 1848.

READ the following letter :

No. 719.—From *G. A. Bushby*, Esq., Secretary to the Government of India, to *Sir H. C. Montgomery*, Bart., Secretary to the Government, Fort St. George.

Sir,

No. 40.

I AM directed to acknowledge the receipt of your letter (No. 941), dated the 29th ultimo, with its enclosures, and to state that, pending a reply from the Honourable Court to the reference made by the Government of Fort St. George, the Governor-general in Council sanctions an expenditure of 7,000 rupees per mensem from the 1st proximo, for the prosecution of the annicut on the Godavery. I am, however, desired to observe, that his Lordship in Council sanctions these anticipatory expenditures with great reluctance.

2. The original enclosures of your letter are returned.

Fort William,  
16 September 1848.

(signed) *G. A. Bushby*,  
Secretary to the Government  
of India.

EXTRACT Revenue Letter to Fort St. George, dated 22 August (No. 9) 1849.

Letter from, dated 20 November (No. 83) 1848. (7 to 11). Estimates amounting to Rs. 60,311. 11. for improvements to works of irrigation in Tanjore, sanctioned.

38. ALTHOUGH the cost of these works is considerable, we observe that you entertain a confident expectation that it will soon be repaid by the increased revenue that will arise from their operation.

Revenue Department, 13 February (No. 6, of 1849).

To the Honourable the Court of Directors of the East India Company.

Honourable Sirs,

Para. 1. WE have the honour to acknowledge the receipt of your Honourable Court's despatch in this department, dated 20th September 1848 (No. 15), in reply to our communications reporting on the expenditure on the Godavery Annicut, the progress of the work, and the sum yet required to complete it.

Cons. 14 Nov.  
1848, No. 63.

2. We furnished a copy of this despatch for the information and guidance of the Board of Revenue in the Department of Public Works, with instructions to proceed, under the sanction granted by your Honourable Court, with the preparation of materials necessary for the completion of the annicut works.

Cons. 5 December  
1848, Nos. 54, 55.

3. In compliance, also, with your instructions, we nominated Captain Buckle and Brevet Captains Bell and Orr, together with Mr. Forbes, sub-collector of Rajahmundry, members of a committee to report upon the Godavery Annicut. The committee were desired to assemble at the site of the annicut, and after a survey of its actual condition, and scrutiny of the plans proposed by Major Cotton to be pursued for completing it, to furnish a full report on all points. They were also required carefully to examine the estimates which were prepared for the completion of the works, as well as the accounts of the expenditure hitherto incurred, and to report their opinion thereon, with reference especially to the cost and charges for machinery and preparatory arrangements for carrying on the works.

Dated 13 January  
1849; Extract  
Min. Cons. 13 Feb.  
1849; sketch plan  
of the works.

4. We have now the honour to submit the report which the committee have furnished us, and to solicit the careful and especial attention of your Honourable Court to the details it contains, as well as to the plan of the works accompanying. By this report your Honourable Court will learn that the expenditure on the works

works of the Godavery Annicut amounted to the end of November 1848 to 5,03,703 rupees, and that a further sum of 4,07,506 rupees is estimated by the committee as required to bring it to completion. P. 14 and 62

5. We will not attempt to follow the committee through the various details of their report, but only observe in the expenditure, the item for what is designated the "plant" amounts to the large sum of 1,96,298 rupees, and that for superintendence to no less a sum than 31,625 rupees. In regard to the last, the committee say, "As far as the committee are able to judge, there seems to have been an excessive expenditure for superintendence, but this was owing in measure to the inefficiency of the available persons, to the extensive and divided character of the works, and to the anxiety of the civil engineer that no available delays should occur." P. 64. P. 47.

6. In noticing the chief items of which the former is composed, they say, "it seems, therefore, to the committee, quite clear that the expenditure upon steam tugs, like that upon railways, was a matter of necessity with reference simply to the description and magnitude of the work, in which, as before said, the saving of time is a most important element of stability of construction." P. 30.

7. In para. 32, noticing another item of charge, the committee thus express themselves. "The only remaining item under this head is 9,301 rupees for two steam engines constructed here, one intended for a boat, the other for turning a saw; they have not been applied however to any useful purpose; and the committee are of opinion that it was injudicious to attempt works of this description, with the limited means at command in the workshop."

8. We are constrained to remark, that making full allowance for the difficulties Major Cotton had to contend against, and the magnitude of the work he had undertaken, he cannot stand excused for profuse and uneconomical expenditure of the public money.

9. It will, however, we hope, be satisfactory to your Honourable Court, as it has been to us, to observe the deliberate opinion of the committee on the section of the annicut which Major Cotton has adopted, and on the subordinate works appertaining to it; as recorded in the following passages, which we quote entire:

"With regard to the most important point, the section of the annicut, the committee after a minute consideration of the subject, are satisfied that the work may be carried forward with safety and success upon the section hitherto followed, with some improvements recommended by Captain Orr." P. 52.

"The section is novel, and considering its adaptation to the description of available material, and to the necessity of rapid construction, appears to the committee highly creditable alike to the theoretic and practical knowledge of Major Cotton. Its stability, they conceive, has been remarkably demonstrated by the events of the last season; all the work that was not actually raw, having, though much of it was hastily constructed, suffered but little damage, even under extraordinary trials; the excellence of the mortar made from the hydraulic lime of the neighbourhood is an important element of the stability of the work, and the experience already obtained in the management of this lime, will render it more valuable for the future." P. 53.

"The only change in the section which the committee recommend, is a narrow wall (as originally intended by Major Cotton) in lieu of the daw stones and boards afterwards suggested; the latter are open to several objections, and the committee are of opinion that the increased breadth of the loose stone apron will neutralize any extra force of over-fall caused by the proposed wall." P. 54.

"The subordinate works do not require particular remark; they are all planned in the opinion of the committee on sound principles, and will be fully effective; the committee, however, have no doubt that a considerable annual expenditure, particularly in rough stone for aprons, and the defence of particular points of the banks, will be required for some time; the readiness with which this indispensable material may be supplied, is a great advantage of the present arrangements." P. 55.

10. In the present state of the annicut it has appeared to us after mature deliberation that we have no alternative but to authorize the work to proceed, and we trust that in so doing we are only carrying out the views and instructions of your Honourable Court as given in the 5th para. of your letter, under acknowledgement, wherein you observe "In the present state of the works, it is obvious that the large expenditure already incurred will be altogether lost, unless the further amount required to complete them is authorized; we have therefore no alternative but to give our sanction to their being proceeded with, in full reliance on the pledge

Godavery Annicut. — pledge given in your letter, that you will not give effect to the sanction until you are fully satisfied that your doing so will secure the desired end, and beyond the chance of failure, of which the condition of the annicut after the rains will afford you ample opportunity to judge," and we are fortified in this our resolution by the sentiments expressed by the committee in the 69th and 70th paras., which for easy reference we enter in the margin;\* we have accordingly sanctioned the revised estimates of the committee, amounting to Rs. 4,07,505. 8.

\* See below.

11. Your Honourable Court will also observe, that the committee are of opinion, that the rates for masonry and cut stone are "singularly low, and that were each of them increased 50 per cent., the annicut might even then be pronounced one of the cheapest works ever constructed, if its immense length, and its situation, with the endless difficulties arising therefrom, were duly considered."

12. We propose applying to the Supreme Government for sanction for opening the Rallee and other irrigating channels required to give effect to the Godavery Annicut, but your Honourable Court will perceive, by our Consultation of this date, that we are alive to the dangers of undertaking more work at a time than can be carefully superintended and satisfactorily executed, and that we deprecate the haste which has already, in this work, been the great cause of the embarrassments which have occurred, and have warned both the Board of Revenue and the executive officers against allowing its recurrence.

13. Considering the magnitude of the work and the responsibility attached to the engineer officer superintending it, we have resolved to accede to the recommendation of the Board of Revenue, and to sanction, as an additional charge, the disbursement to Captain C. A. Orr, of the full allowances of a civil engineer, but subject to the approval of your Honourable Court. We are well satisfied with this officer's performance of the arduous duties entrusted to him, since the departure of Major Cotton on sick leave.

We have, &c.  
(signed) *Henry Pottinger.*  
*G. H. F. Berkeley.*  
*D. Elliott.*

Fort St. George, 13 February 1849.

Revenue Department, No. 146.

From Sir *H. C. Montgomery*, Bart., Secretary to the Government of Fort St. George, to *F. J. Halliday*, Esq., Secretary to the Government of India.

Sir,

To Government of India, dated 8 Jan. 1848, No. 739.  
From Government of India, dated 5 Aug. 1848, No. 615.  
To Government of India, dated 29 Aug. 1848, No. 941.  
From Government of India, dated 16 Sept. 1848, No. 719.

WITH reference to the correspondence that has already taken place on the subject of the works of the Godavery Annicut in the Rajahmundry district, I am directed by the Right honourable the Governor in Council to transmit, for submission to the Government of India, copy of a despatch from the Honourable Court of Directors, and of the further papers noted in the margin,† containing the proceedings of this Government with respect to that project.

\* See below.

2. It will be observed that, pursuant to the Honourable Court's instructions, a committee,

\* 69. Had the actual arrangement for the execution of the work not been made, it is impossible to calculate what would have been the cost. That it might have been less in positive outlay may be allowed, but always with a proviso for a very large increase of contingent expenditure, proportionate to the length of time requisite under a different system. And it cannot be doubted that the length of time would have been very great indeed, the district being totally without experience in public works, and all the native functionaries averse to any exertion in such a novel line of duty.

70. It is scarcely necessary to add, that time itself, in the construction of the annicut, is money. If the work is to increase the revenue, the sooner the increase begins the better. If the increase has been in any measure rightly estimated, it will speedily pay a much larger interest upon the extra expenditure than the rate at which the company borrow money, and a single year of drought, which may happen at any time, would compel all to acknowledge the annicut to be of incalculable value.

† From Honourable Court of Directors, dated 20 September 1848; Extract Minutes of Cons. dated 14 November 1848, No. 245; From Board of Revenue, dated 23 November 1848, with Capt. Orr's Report, dated 16 September 1848; Extract Minutes of Cons. dated 5 December 1848, No. 1,340; From the Committee of the Godavery Annicut, dated 13 January 1849; Extract Minutes of Cons., dated 13 February 1849, No. 145; one sketch plan of the works; Letter to the Honourable Court of Directors, dated 13 February 1849, No. 6; Note.—Estimates and Statements not forwarded.

committee, chiefly of engineer officers, was appointed to assemble at the site of the annicut, and to furnish a full report upon the work in all its branches, and that upon the information furnished by the committee in their report, to which the attention of the Government of India is solicited, as well as to the orders passed thereon, authority has been granted by this Government under the conditional permission of the Honourable Court given in the 5th para. of the despatch of the 20th September 1848, No. 15, for the continuance of the works in the estimates framed by them, amounting to Rs. 4,07,505. 8; and this proceeding has now been reported to the Honourable Court. The Government of India will perceive that this large expenditure will not be incurred in one year, but will extend over the working season of 1849 and 1850.

3. With reference to the concluding para. of the committee's report, I am desired to intimate that the Board of Revenue have been requested to submit in a clear and concise form, the estimates for opening the Rullee and other irrigating channels required, to extend to all parts of the district the benefit of the annicut, and that when these are received, a separate communication will be made to the Government of India.

I have, &c.  
(signed) *H. C. Montgomery,*  
Secretary to Government.

Fort St. George,  
13 February 1849.

Home Department, No. 150.

From *F. J. Halliday, Esq.,* Secretary to the Government of India, to *Sir H. C. Montgomery, Bart.,* Secretary to the Government of Fort St. George.

Sir,

I AM directed to acknowledge the receipt of your letter, No. 146, dated the 13th ultimo, on the subject of the Godavery Annicut, and to state, in reply, that the President in Council does not understand the conditional sanction given by the Honourable the Court of Directors in their despatch to the Government of Madras, of 20th September 1848, to be sufficient to justify so large an additional expense as 4,07,506 rupees being incurred for the completion of the work, without a further reference to them. In the despatch cited, the Honourable Court expressed themselves dissatisfied that a supplementary estimate of 1,39,100 rupees should be necessary, in addition to the original estimated cost of 4,75,752 rupees, and taking into consideration that the present estimate is far in excess of the amount to which the Honourable Court then objected, it appears to the President in Council that the most expedient course under the circumstances would have been to seek and await the orders of the Honourable Court before entering on so large an additional expenditure.

Fort William,  
3 March 1849.

I have, &c.  
(signed) *F. J. Halliday,*  
Secretary to Government of India.

Revenue Department, 18 July (No. 6) 1849.

Our Governor in Council at Fort St. George.

Para. 1. We now reply to your letters of the dates noted in the margin,\* on the subject of the operations in progress, for constructing an annicut across the Godavery River.

\* See below.

2. We have also received from the Government of India the communications referred to in the margin† on the same subject.

† See below.

3. In obedience to the orders contained in the concluding paragraph of our despatch of the 20th September (No. 15) 1848, you appointed Captain Buckle, Brevet

\* Godavery Annicut.—Letter dated 14 January (No. 12) 1848, p. 16 to 18; Letter dated 12 September (No. 66) 1848; Letter dated 20 November (No. 83) 1848, p. 5 and 14; Letter dated 13 February (No. 6) 1849.

† Public Letter, dated 10 December (No. 51) 1847, p. 16 to 18; ditto, ditto; 3 March (No. 7) 1849.

Godavery Anicut.

Brevet Captains Bell and Orr, and Mr. Forbes, sub-collector of Rajahmundry, a committee to examine and report on the actual condition of the Godavery works, and the plans proposed by Major Cotton to be pursued for completing them.

4. The report of the committee, who appear to have performed this duty in a most satisfactory manner, was forwarded to you on the 13th January last.

5. We gather from this report that the main causes of the large excess of the expenditure over the estimate, were firstly the disproportionate amount of outlay on what is termed the "plant," consisting of the machinery, steam tugs, railroads, &c., provided for the preparation and transportation to the works of the materials required for the construction of the annicut; and secondly, the great inadequacy of the original estimate in regard both to the rates and the quantity of the materials themselves. With respect to the rates as deduced from actual expenditure, the committee observe, "If the total supposed cost of the masonry and loose stone, 4,26,868 rupees, be added to its appropriate plant, 2,00,000 rupees, and the total, 6,26,868 rupees, be divided by the number of 3,28,825 cubic yards, the rate per cubic yard for masonry and loose stone together, will be Rs. 1. 14. 6. per cubic yard, including a large proportion of cut stone. The committee are of opinion that the above-mentioned rates are singularly low; and that were each of them increased 50 per cent., the annicut might even then be pronounced one of the cheapest works ever constructed, if its immense length and its situation, with the endless difficulties arising therefrom, were duly considered."

6. Considering the opinion of the committee that the rates at which the work has been actually performed, although greatly in excess of those estimated, are singularly low, we cannot acquit Major Cotton of blame in having submitted an estimate for your sanction in which the rates were assumed at an amount at which it is clearly impossible that the work could have been performed, and we are surprised that such an error should have escaped the notice of the chief engineer and secretary to the Board of Revenue in the Department of Public Works, whose peculiar duty it is to satisfy themselves, not only that the works which they recommend to Government are properly designed, but that the expenditure is estimated with as near an approach to accuracy as may be possible. The want of care exhibited in this instance must greatly tend to diminish our confidence in the correctness of future estimates.

7. In respect to the plans of the works, the committee report, that "with regard to the most important point, the section of the annicut, after a most minute consideration of the subject, they are satisfied that the work may be carried forward with safety and success upon the section hitherto followed, with some improvements recommended by Captain Orr," and they conclude their report by observing, that "reviewing their inspections and investigations, they are constrained to record their very high opinion of the science, practical ability and indefatigable labours of Major Cotton, displayed in the great work under report. It is scarcely possible to place that officer's qualifications as an engineer of hydraulic works higher than they stood before; but the Godavery Anicut is a new and splendid illustration of the powers of mind and self-devotion, from the exercise of which the country has already so largely benefited."

8. The total amount expended on the annicut up to the end of November 1848, was 5,03,703 rupees, and according to the committee's estimate, a further sum of 4,07,506 rupees will be required to complete the work, making an aggregate expenditure of 9,11,209 rupees, or 4,35,639 rupees in excess of the sum originally sanctioned for that purpose.

9. Under these circumstances, and in pursuance of the instructions contained in the 5th para. of our despatch of the 20th September (No. 15) 1848, you have resolved to authorize the work being proceeded with; you state that you are still sanguine that the advantages to be gained by the Godavery Anicut have not been overrated, and you refer to the opinion expressed by the committee, already quoted, that even at its greatly augmented cost, the annicut will still be a cheaply constructed work.

10. However much we regret the imperfect nature of the information which was submitted to us when our sanction to the undertaking was originally solicited, it is obvious that the whole of the large expenditure already incurred must be entirely lost, unless the works are carried to completion; and the sooner the country begins to derive the expected benefit from the work, the earlier will you receive some compensation for the outlay in the shape of an increased revenue.

We

We observe, that the committee state, that "the annicut will, it is expected, be effective for a large supply of water this season, and will next year be, in all probability, at its full height." Godavery Annicut.

11. We accordingly approve and sanction the course of proceeding which you have adopted; but we would, at the same time, call your attention to the absolute necessity of requiring from the Board of Revenue in the Department of Public Works a strict adherence to the instructions communicated to them in para. 10 of your Minutes of Consultation, of the 13th February 1849, with the view of ensuring, as far as possible, a successful issue to the undertaking.

12. We also approve of your having granted to Captain Orr, for the period during which he may be engaged in superintending the construction of the annicut, the full allowances of a civil engineer.

We are, &c.  
(signed) A. Galloway,  
J. Shepherd,  
&c. &c.

London, 18 July 1849.

Revenue Department, 23 January (No. 6) 1850.

To the Honourable the Court of Directors of the East India Company.

Honourable Sirs,

Para. 1. We have the honour to submit, for the information and orders of your Honourable Court, copies of communications from the Board of Revenue in the Department of Public Works, and of the correspondence which accompanied them, on the subject of the damage sustained by the Dowlaiswaram branch of the Godavery Annicut in the Rajahmundry district, during the freshes of the late season, together with copies of minutes recorded by our President and the Honourable Mr. Elliott, and of an extract from the Minutes of Consultation, containing the orders issued by Government.

2. Soliciting your attention to the views expressed by the members of Government in respect of the cause of the damages, and of the best means of remedying them, we request your special sanction for the further sum of Rs. 25,709. 8. required for the security of the work, merely intimating in this place, that under the emergency of the occasion, we have ordered the work to be proceeded with from the sum of 50,000 rupees allowed in the last sanctioned estimate for contingencies, the greatest portion of which, it will be observed, is reported to remain untouched.

We have, &c.  
(signed) Henry Pottinger.  
G. H. F. Berkeley.  
D. Elliott.

Fort St. George, 23 January 1850.

MINUTE by the Right Honourable the President.

I HAVE read these letters with deep regret, and it is very repugnant to my feelings to say that they tend to strengthen in my mind an apprehension which I have latterly felt, and which I have heard expressed by others more competent than myself to form an opinion, that the annicut will, after all, prove a failure.

I am quite ready to admit that the past season has been one of an extraordinary nature, as regards the unusually heavy falls of rain to the westward, and the concomitant high freshes in all the rivers that have their sources in that quarter; but these papers by no means satisfy me that the damage which has been done to the annicut would not have occurred had the freshes been of the ordinary description, because I look on it that the impeded rapidity of the current will always inevitably create strong lateral currents and eddies, which will force a passage either through the works, or by removing the alluvial soil of the lunkas (islands), or sweeping around the extreme ends of the wing walls, and in one or other of these ways will form new channels for the escape of the water, so as to render the annicut of no avail.

I express these sentiments with much deference, in opposition to those of the scientific officers who have examined and reported on the annicut, but I have witnessed such wonderful alterations, from less impediments than those offered by the annicut, in the Indus River (which is not so large as the Godavery during the height of its inundations), that in a soil such as the delta of the Godavery appears to be, I cannot place confidence in any of the explanations for the past or plans for the future.

I trust I shall be mistaken; but with the impressions which have been forced on me by

Godavery Annicut. narrowly looking into the whole of the proceedings of this Government in connexion with the annicut, I deem it right to candidly state my fears.

I do not think the Madras Government can authorize the increase to the estimate applied for without the approval of the Honourable Court, which must be applied for. In the meantime, I do not myself see that the addition now proposed need be delayed; it can be carried on from the funds already sanctioned, and to that extent only can I be a party, and which is recommended by the Board of Revenue, Department of Public Works.

30 December 1849.

(signed) *Henry Pottinger.*

No. 32.

MINUTES by the Honourable Mr. Elliott.

Monthly Report,  
dated 8 November.

ON the 19th November, the Board of Revenue in the Department of Public Works laid before Government a report of the civil engineer in charge of the Godavery Annicut, upon the state of that work when the fall of the river had discovered the effects of the extraordinary floods of the late season. It then appeared, that while in other parts this great work had successfully withstood the enormous pressure upon it, the Dowlaiswarum branch had been seriously injured, the masonry having "sunk and broken in three places, each only a few yards wide, and all within 150 yards of the western or Pulchacun Lunka wing walls." The further extension of these breaches was immediately stopped by throwing in loose stone, and the work will be effectually repaired by rebuilding the injured masonry for about 100 yards in length, which, the civil engineer says, with the means at his disposal, will be but a few days' labour.

Civil Engineer's  
Report.

The cause of this accident was readily discovered in the removal of the sand to a depth of 25 feet in front of the annicut, in consequence of the excessive lateral set of the stream, occasioned by the extreme projection of the wing walls from the bank of the Putchuka Lunka. Means had been used to counteract this lateral current, but, owing to the great height and long continuance of the freshes, without the desired effect. The annicut being nearly perpendicular to the course of the river, the effect of the stream, it is stated, is everywhere, but near the Putcheeka Lunka wing walls, to deposit sand in front to the level of the crown of the work, and so to prevent all danger of a similar accident occurring elsewhere. The civil engineer was of opinion that the work might be rendered safe against the recurrence of such an accident, by removing the wing walls and the embankment connecting them with the lunka, and carrying the annicut right up to the bank of the lunka. He only forbore from pressing this remedy on account of the expense; the alternative he proposed was to make several great groins of stone, and to line with stone the whole of the front of the work for some distance to a breadth of 20 yards.

The civil engineer having been called upon by the Board of Revenue to furnish a plan of that part of the annicut at which the damage had occurred, and an estimate of the work considered to be absolutely necessary, in complying with this requisition, he has submitted further explanations in illustration of the way in which the damage occurred, and of the effect of the groins recommended by the committee, so far as it had been possible to form them before the freshes came down, and has stated his reasons for preferring the extension of the annicut to the other project of covering the work where it is exposed by additional groins, although the cost of the former will be 25,709 rupees, while that of the latter will be only 10,000 rupees.

It appears that the groins actually formed were effectual in a good measure, the wing walls having been saved by those placed for their protection, and the foundations of the annicut having been undermined only in the spaces between the groins formed in front of it. It would seem, therefore, that the deposit of a mass of stone filling up the spaces between the existing groins would be an adequate defence. But the cause of danger on the set of the stream, from the projection of the wing walls into the bed of the river, would remain, and can only be effectually removed by taking them away, and extending the annicut to the natural bank, which measure, considering the importance of securing the safety of this great work, the civil engineer therefore strongly advises, and the Board of Revenue in the Department of Public Works, assisted by the professional opinions of their colleague, the chief engineer, and their engineer secretary, who was a member of the committee upon the annicut, agree with him in recommending it as a means to place the work as much as possible beyond the reach of further risk.

In such a work as this, it is of the first importance to make it as secure as possible. It would be very imprudent, I think, to adopt a palliation when a complete remedy presents itself which can be effected at a cost little more than double. In considering the expense, we must bear in mind what has been sunk in the work, and the expected return, which it would surely be a false economy to put in jeopardy by a half measure to save some 15,000 rupees. I am clear, therefore, for extending the annicut to the lunka. It would be advisable to make a reference to the Honourable Court for their orders on the subject if there were time, but, of course, the work must be done before the first rise of the river (and the earlier the better, in order that the masonry may be dry and consolidated before it is put to the test of a fresh), which would be impossible if it were not commenced before the orders of the Court could be received. The last sanctioned estimate leaves 50,000 rupees unappropriated to meet contingencies. Of this little has yet been called for, and I think that the amount of the present estimate may properly be defrayed out of the balance in anticipation of the Court's order; a report should however be made to the Honourable Court without delay, with a request for their special sanction to the allowance of this particular estimate, as a supplemental

a supplemental one, still leaving 50,000 rupees available for contingencies under the general Godavery Annicut estimate of the committee.

In conclusion, I would observe that the experience we have had during the late season of the general stability of the annicut, unfinished as every part of the work is, under a pressure unprecedented, and therefore not calculated upon, affords, in my opinion, better grounds for anticipating a successful issue to the undertaking than we have ever yet had, and that nothing has transpired, to my knowledge, to make me less sanguine than I have hitherto been of the work being completed in a manner to reflect credit upon the officers who designed it, and have had the charge of its execution, and of its proving effective for the objects contemplated.

3 January 1850.

(signed) *D. Elliott.*

EXTRACT Revenue General Letter from Madras, dated 6 June (No. 30.) 1850.

Para. 8. Your Honourable Court will have already learnt from the reference made by the Government of India, that estimates to the amount of Rs. 87,120. 14. 5. have been sanctioned by that Government in anticipation of your orders for opening the Rallee and Dowlaiswarum Channels from the Godavery Annicut, being only a small portion of the subordinate works which are considered indispensably necessary to give full effect to the whole project. We now transmit, for the information of your Honourable Court, copies of the periodical reports on the progress of the works received to the present date; and request your attention to those recorded in the Consultation of the 23d April and 14th May, from which it will be observed, that a breach which occurred in the Rallee temporary dam has since been closed, and that the acting civil engineer entertains no doubt of being able to complete, before the arrival of the freshes, the masonry of that branch of the annicut, as well as all the work marked out for this season.

No. 972.

From Sir *H. C. Montgomery*, Bart., Secretary to Government, to *F. J. Halliday*, Esq., Secretary to the Government of India.

No. 18.

Sir,

I AM directed by the Right honourable the Governor in Council to request you will submit for the early consideration and orders of the Government of India, the accompanying estimates of the cost of opening the Rallee and Dowlaiswarum Channels from the Godavery Annicut in the Rajahmundry district, amounting to Rs. 87,120. 14. 5.

2. The reports of the Board of Revenue and of the local revenue and engineer officers, as well as the report of the chief engineer on the proposed works, are transmitted, together with the map and sections with which they are accompanied; and to these I am desired to add copies of minutes recorded by the Right honourable the President, and the Honourable Mr. Elliott, and to request that the particular attention of the Government of India may be called to the views they contain.

3. The Government of India will observe that the estimates now brought under their notice are for only a small portion of the subordinate works which are considered indispensably necessary to give full effect to the whole project of the Godavery Annicut; and that the Government anticipate from them immediate and important advantages to the country and to the revenue. The Governor in Council desires therefore strongly to recommend the proposed works for favourable consideration, and to solicit sanction for the expenditure they are calculated to involve, viz., Rs. 87,120. 14. 5.

(signed) *H. C. Montgomery*,  
Secretary to Government.

Fort St. George, 11 October 1849.



Godavery Annicut.

No. 803.

From *W. Grey, Esq.*, Under Secretary to the Government of India, to *Sir H. C. Montgomery, Bart.*, Secretary to Government, Fort St. George.

Sir,

No. 3.

I AM directed to acknowledge the receipt of your letter, No. 973, dated the 11th ultimo, and to state that the President in Council is pleased, in anticipation of the orders of the Honourable Court of Directors, to sanction the estimates for opening the Ralles and Dowlaiswarum Channels, from the Godavery Annicut in the Rajahmundry district, amounting to Rs. 87,120. 14. 5.

Fort William,  
23 November 1849.

(signed) *W. Grey,*  
Under Sec. to Govt. of India.

EXTRACT- Revenue Letter from Fort St. George, dated 12 February (No. 9) 1851.

Diary to Cons.,  
11 February 1851,  
Nos. 16 to 24.

Para. 1. WE have the honour to submit, for the information of your Honourable Court, copy of a letter from the Board of Revenue, and of its enclosures, on the subject of two estimates relating to the Godavery Annicut, together with copies of minutes recorded by our President and the members of Government; and an extract from the Minutes of Consultation, containing the orders finally adopted.

2. Referring your Honourable Court more particularly to the views of the individual members of Government, we shall briefly state in this place, that we have sanctioned an estimate of 16,442 rupees for the ordinary repair of the Godavery Annicut; and that we have applied to the Government of India for sanction to disburse a further sum of Rs. 65,742. 4, in the extension of the Vijeswarum branch of the annicut, which the local engineer officers and the Board of Revenue have pronounced to be indispensably necessary for the security of the whole fabric.

No. 123.

From *Sir H. C. Montgomery, Bart.*, Chief Secretary to Government, to *F. J. Halliday, Esq.*, Secretary to the Government of India.

Sir,

No. 24.

I AM directed by the Right honourable the Governor in Council to request that you will submit for the consideration and orders of the Government of India, the accompanying copy of a letter from the Board of Revenue in the Department of Public Works, with its original enclosures on the subject of certain estimates relating to the Godavery Annicut in the Rajahmundry district; together with copy of an extract from the Minutes of Consultation, containing the views of Government, and including the minutes recorded by the Right honourable the Governor and the members of Government, which afford more particular exposition of their several sentiments.

The Governor in Council trusts, that under the circumstances represented by the local officers and explained in these proceedings, and considering the great emergency of the case, the early sanction of the Government of India may be granted to the proposed extension of the Vejaswarum branch of the Godavery Annicut, at a further disbursement of Rs. 65,742. 4.

Fort St. George, 8 February 1851.

(signed) *H. C. Montgomery,*  
Chief Secretary.

MINUTE by the Right Honourable the President.

No. 17.

LETTER from the Secretary to the Board of Revenue Department, Public Works, dated the 19th December 1850, with enclosures from the civil engineer of the 1st division, and Collector of Rajahmundry.

I HAVE read the above letter and its accompaniments, and also have gone over the previous correspondence now in circulation, with the attention their importance demands.

I purpose, however, being very brief in my remarks on them, because I have nothing satisfactory to offer in the way of comment.

I do

I do not think that the Board of Revenue, Department Public Works, were justified in Godavery Annicut. sanctioning, under all circumstances, the estimate\* for what is called ordinary repairs, without a previous reference to Government, and I fancy such an amount must be submitted for the \* Ra. 16,442. approbation of the Government of India.

With respect to the estimate for "the probable expense" of extending the Vijaswarum division of the annicut, amounting to Rs. 65,742. 4, I say with regret and pain that I cannot, after the fullest reflection, give my personal support to a recommendation in its favour. I have here but to refer to the minute I placed on record on the 19th of September 1849, and to others alluded to in it, to show that I have all along had my misgivings as to the ultimate success of the work, and, if I remember right, the very circumstance which is now quoted, as likely to endanger the whole fabric, was at the outset adduced as the strongest proof of its stability; I mean the non-removal of the sandy foundation, which seems to be perfectly incapable of resisting the action of the strong currents.

In the face of the Honourable Court's orders, and of the opinion expressed by the Government of India, I can only say I do not object to a reference to either or both those high authorities, but beyond this I am not prepared to go.

(signed) Henry Pottinger.

MINUTE by the Honourable Mr. Elliott.

From Secretary Board of Revenue, Department Public Works, dated 19 December 1850.

In this letter are submitted two estimates relating to the Godavery Annicut.

No. 18.

One has been forwarded by the collector of Rajahmundry as belonging to the head of "ordinary" work, being for repairs to the annicut, and the embankments of the river and the lunkas, connected with it. The annicut, when it is completed, will of course require periodical repair, and a distinct provision must be made for the expense; this will be one of the ordinary charges for maintaining the system of irrigation upon which the revenue of the district will be mainly dependent. The repairs now required are of the same nature; the annicut has been partly executed, and is already to a considerable degree effective, and is yielding a return in the improvement of the revenue. So far as the construction has gone, it is, an effective revenue work, and must be maintained in the ordinary way; it would be irregular to charge the necessary repairs against the estimate for construction. It appears to me quite correct to provide for them by an "ordinary" estimate, and I have no doubt it is within the competency of this Government to sanction the estimate, as other estimates for ordinary repairs for maintaining works for the purpose of irrigation are sanctioned. I observed that the committee anticipated "that a considerable annual expenditure, particularly in rough stone for aprons, and the defence of particular points of the banks, will be required for some time." The estimate amounts to 16,442 rupees, and the Board, considering the repairs indispensably requisite, have, in anticipation of the sanction of Government, authorized their execution from the amount already sanctioned for the construction of the work generally. It would have been better if the Board had applied at once to Government, but some delay has been prevented by the course they took, and the saving of time is of consequence in such repairs.

The estimate, I think, should now be sanctioned, and the charge kept distinct from the charge of construction.

The other estimate provides for an extension of the annicut beyond the original plan for the security of the Vignaswaram branch, which, from circumstances explained by the civil engineer, has been more severely tried than the other parts of the work. From the experience of the last season, the civil engineer is convinced that it will not be safe to leave the annicut as at present, with its terminus on the Vignaswarum side on the edge of a lunka, which he now perceives is likely to be cut away by the water forcing itself round. To guard against this, and to reduce the amount of overfall, which is excessive at present to a dangerous degree, the civil engineer proposes to cut away 400 yards of the lunka, and to extend the annicut that length; the effect of this extension the Board say will probably be to reduce the overfall about one-third, or from six to about four feet, which, they observe, will be a great relief. The Board are of opinion that the additional work is indispensably necessary for rendering the whole secure.

If it be so, and from what is represented, I have no doubt on the point, the expediency of incurring the large additional expense required for the extension of the annicut seems to me unquestionable, and I consider it to be the duty of this Government, not only to recommend, but strongly to urge that the measure proposed may be sanctioned by the Government of India.

The magnitude of the work at stake, as it appears, demands earnestness in stating the case to the Government of India, so that there may be no hesitation in authorizing what experience has proved to be needful. It is a large addition, it is true, which this estimate, amounting to 65,742 rupees, will make to the cost of the whole work, but the consideration that without it the whole will be in jeopardy, ought, I conceive, to be pressed as of paramount weight.

After the severe trials the annicut has suffered and successfully sustained during the process of its construction, we have good reason to rely on the soundness and strength of the structure as equal to the pressure upon it, if that can be duly regulated, and if it can be saved from such injurious action from partial causes as has occurred in this instance in the manner explained by Colonel Cotton. With a river like the Godavery to contend with, it must be

acknowledged

Godavery Annicut. acknowledged that to provide adequately at all points for the safety of such an extensive work as the annicut, was a task so difficult as to call for the most liberal allowance for defects; indeed it would have been a wonder if a plan had been devised which did not upon actual experience require correction to meet unexpected contingencies; but the experience the engineers have gained, during the three years the work has been in progress, may be justly depended upon.

They have ascertained where the danger lies, and the measure now proposed we may trust will sufficiently guard against it. I am of opinion, on the whole, that we have as good reason to expect that this most important work will be accomplished effectually as we have had at any period of its progress; I might say better reason, inasmuch as its security has been to a great extent proved by the test of experience, and the apparent danger is reduced within comparatively a small compass, and is well understood. We have already begun to reap the fruits anticipated in the improvement of the revenue, as shown by the statements supplied by the Collector, and forwarded by Colonel Cotton, and are gathering the means of meeting the additional expenditure from the operation of the work itself in its unfinished state.

21 January 1851.

(signed) *D. Elliott.*

MINUTE by the Honourable Mr. Thomas.

No. 19. I concur entirely in all the remarks in this minute, and would strongly urge upon the Government of India the propriety of sanctioning the further outlay proposed for widening the annicut, a work pronounced by the civil engineer indispensable, and obviously necessary to secure the works, and the full advantage of the expenditure already incurred.

22 January 1851.

(signed) *J. F. Thomas.*

MINUTE by the Right Honourable the President.

No. 20.  
21 January 1851;  
22 January 1851.

I HAVE kept these papers, in which are included the minutes of my honourable colleagues, of the dates noted in the margin, for two or three days, to consider the arguments adduced by them.

No one can more highly appreciate the value of the annicut than myself, or more anxiously wish for its perfect success; but I cannot lay my hand on my heart and conscientiously say that I think it will succeed. My own experience of similar works, on a trifling scale, has been considerable; and from the moment I came to Madras, I have, I candidly confess, been more guided by the opinions of the different clever and scientific officers who have examined and reported on the feasibility of this great project, than by any self-imbibed conviction.

Had I been at Madras when the work was first talked of, and my opinion been asked as to the possibility of forming an artificial foundation in the sandy bed of a river like the Godavery for a work of such magnitude as the annicut, I should have decidedly voted against the attempt; and circumstances have casually come to my knowledge, in the course of the inquiries which I have naturally made from various individuals, that strongly tend to strengthen the doubts I entertained from my own observations.

My belief is that, in the desire of the projectors of this work to overcome all difficulties, they have not made sufficient allowance for the stupendous scale on which physical powers are opposed to them. I think the celebrated geographer, Rennell, mentions in one of his memoirs, that the Burhampooter River dislodged a bed for itself which contained sufficient land "to form an island 50 miles square in 20 fathoms water;" and although it is far from my intention to compare the Godavery with the Burhampooter, yet when I hear of the steam-boats, that were lying one season "in deep water" in the Godavery, being buried, "by a single storm," under a sand-bank 20 feet high, which is three-times the altitude of the annicut, I can only draw one conclusion from the fact, and that is, that the work is beyond the power of science and human means to command.

I feel all the responsibility of opposing the various scientific and other opinions which have been passed on the annicut, but I do so from no feeling but an internal conviction. I am ready to share the responsibility of asking the Government of India or the Honourable Court to sanction the present expense; but in doing so, I feel it is due to my own character to beg that this minute be sent with the application.

1 February 1851.

(signed) *Henry Pottinger.*

MINUTE by His Excellency the Commander-in-Chief.

No. 21.

So much has been already expended, and, if I am rightly informed, the annicut has already begun to pay, that it will be a great pity if such an undertaking is abandoned without some further trial.

3 February 1851.

(signed) *G. H. F. Berkeley.*

MINUTE

MINUTE by the Honourable Mr. Thomas.

Godavery Annicut.

No. 29.

I THINK this is the true view, that so much money has been expended on this work, and that even now returns of revenue are received from it, that, let the opinions of its ultimate success be most unfavourable, still a fair trial should be given to the project, and that the additional outlay required should not be refused at this date.

3 February 1851.

(signed) J. F. Thomas.

NOTE by the Chief Secretary.

No. 29.

1. In their letter of the 19th December 1850, the Board of Revenue submit two estimates; one, an ordinary one, for repairing the Godavery Annicut, and the river banks near it, at a cost of 16,442 rupees; and the second an occasional estimate, for extending the Vijeswarum division of the annicut, at an expenditure of Rs. 65,742. 4.

2. The annicut, though executed only in part, is already to a considerable degree effective, and is yielding a return in the improvement of the revenue, having supplied, in the past season, water to all the lands in a state to receive it. So far as the construction has gone, the annicut must be viewed as an effective revenue work, and as such to be maintained in repair, like all other works yielding revenue, for the preservation of which ordinary estimates are provided, and sanctioned by Government. The estimate amounts to 16,442 rupees; and the Board of Revenue, considering the repairs indispensably requisite, have, in anticipation of the sanction of Government, authorized their execution from the amount already sanctioned for the construction of the work generally. Though the proper course would have been to have applied at once for sanction, yet the Government see no reason to disapprove of the proceeding of the Board of Revenue in issuing their instructions at once, by which delay has been prevented in the repairs, in which the saving of time is of consequence. The Right honourable the Governor in Council resolves, therefore, to sanction the ordinary estimate submitted by the Board of Revenue, amounting to (16,442) sixteen thousand four hundred and forty-two rupees.

3. The second estimate, amounting to Rs. 65,742. 4., provides for an extension of the annicut beyond the original plan, for the security of the Vijeswarum branch, which, from circumstances explained by the civil engineer, has been more severely tried than the other parts of the work. From the experience of the last season, the civil engineer is convinced that it will not be safe to leave the annicut, as at present, with its terminus on the Vijeswarum side, on the low edge of a lunka, which he now perceives is likely to be cut away by the water forcing a wider channel at this point. To guard against this, and to reduce the amount of overfall, which is excessive at present to a dangerous degree, both to the apron of the work and the sandy bed of the river below it, the civil engineer proposes to cut away 400 yards of the lunka, and to extend the annicut that length. The effect of this extension, the Board say, will probably be to reduce the overfall about one-third, or from six to about four feet, which they observe will be a great relief. The Board are of opinion that the additional work is indispensably necessary for rendering the whole secure.

4. The estimate for this purpose, amounting to Rs. 65,742. 4., will make a large addition to the cost of the whole undertaking; but, considering the magnitude of the work which will be in jeopardy without the proposed outlay, and the fact that it has already contributed largely to the public revenue, as shown by the statements supplied by the Collector of Rajahmundry, and forwarded by Colonel Cotton; and that it is besides already furnishing the means of meeting the additional expenditure from its own operations, though yet in an unfinished state, the Governor in Council feels bound to urge that the measure proposed be sanctioned by the Government of India.

5. With these observations, the Governor in Council resolves to submit the correspondence on the subject with the minutes recorded by the Right honourable the Governor, and by the members of Government, for the consideration of the Government of India, with a request that early sanction may be granted for the disbursement of Rs. 65,742. 4.; and he will meanwhile take the opportunity offered by the present mail of reporting these proceedings, for the information of the Honourable the Court of Directors.

(signed) H. C. Montgomery,  
Chief Secretary.

Fort St. George, 8 February 1851.

EXTRACT Revenue Letter from Madras, dated 25 October (No. 60) 1851,  
paras. 1 to 5.

Para. 1. REFERRING to our letters in this department, dated 20th August and 12th February 1851, we have the honour to report our further proceedings connected with the works at the Godavery Annicut.

2. Your Honourable Court will observe, from the communications noted in the margin, that the Government of India have sanctioned the extension of the Vejiasevaram branch of the Godavery Annicut at an expense of Rs. 65,742. 4.;

Cons. 18 March  
1851, Nos. 116,  
117;  
Cons., 6 May,  
but Nos. 30, 31.

224.

c 3

- Godavery Annicut. but for the reasons assigned in our Minute of Consultation of the 6th May last, we have deemed it proper to await another report from the Board of Revenue and the civil engineer before authorizing any further disbursements, having previously sanctioned an advance of 10,000 rupees for providing rough stone, which it was represented would be available for the minor works, if the extension of the annicut on the Vejaswaram side should not be sanctioned. From the subsequent report of the Board, dated 14th July 1851, herewith transmitted, it will be seen that the work is not likely to be required at least for a year or two.
- Cons., 15 August 1851.
- Cons., 22 July 1851, Nos. 29, 30.
3. We have also to inform your Honourable Court, that in compliance with the recommendation of the Board of Revenue, on a communication from the civil engineer of the first division, reporting the failure of the early rains and the probability of a scanty monsoon, we have authorized the opening of such branch channels connected with the Godavery Annicut as the Collector of Rajahmundry might feel sure would be productive, by bringing water to villages able to make use of it, the collector being the judge of the channels to be opened, and to be held responsible that the public-money was not uselessly laid out.
- Diary, 18 March 1851, Nos. 3 to 5.  
Cons., 13 May, Nos. 28, 29.
4. With the sanction of the Government of India, we have authorized an outlay of Rs. 76,396. 10. 11. for extending the works of irrigation on the right bank of the Godavery, and for providing lines of navigation from the annicut to the coast, by which means 300,000 acres of land can, it is estimated, be brought under cultivation.
- Cons., 15 August 1851.
5. We transmit\* periodical reports of the progress made in the Godavery Annicut works, and solicit the attention of your Honourable Court to the observations we have recorded thereon, merely observing in this place, that with the exception of the covering of the Muddoor division, the annicut was completed on the 19th June last, and that the excess in disbursement above the amount estimated for the construction of the annicut works is calculated at 17,000 or 18,000 rupees; a result, however, which cannot be ascertained with certainty until the accounts of the actual expenditure have been submitted.

No. 226.

From Sir *H. C. Montgomery*, Bart., Chief Secretary, to *F. J. Halliday*, Esq.,  
Secretary to the Government of India.

Sir,

No. 5.

REFERRING to my letter, No. 1,229, dated 23d December 1850, and to the correspondence which accompanied it, I am now directed by the Right honourable the Governor in Council to request that you will submit, for the favourable consideration of the Honourable the President in Council, the accompanying copy of a letter from the Board of Revenue in the Department of Public Works, with its original enclosures, being a communication from the civil engineer of the first division, with a sketch and plans, and an estimate for Rs. 76,396. 10. 11., the cost of extending the irrigation on the right bank of the Godavery River by means of the annicut; together with an extract Minutes Consultation, of this day's date, containing the orders passed on the subject by this Government.

The Government of India will observe, that the Right honourable the Governor in Council has felt so satisfied in the necessity of the proposed work, that he has, in anticipation of the approval of his Honour the President in Council, authorized an immediate advance of 20,000 rupees, in order that the civil engineer and district revenue officers may collect materials, and be prepared vigorously to prosecute it immediately the confirmation of the Government of India is received.

The estimate provides for preparing the channels of irrigation on the right bank of the larger body of water which the annicut will throw into them, for extending them in some cases, securing the means of regulating their supply, and providing for lines of navigation from the annicut to the coast; and it is estimated that 300,000 acres of land can be thus brought into cultivation. The works are reported by the Board of Revenue to be substantially designed, and estimated on a liberal scale; and it must be remembered that they form part of the great general project.

\* Cons., 24 January 1851, Nos. 31 to 33; Cons., 11 February 1851, Nos. 72, 73; Cons. 3 April 1851, Nos. 46, 47; Diary, 13 May 1851, Nos. 16, 17; Cons., 11 July 1851, Nos. 65, 66; Cons., 15 August 1851, Nos. 36 to 38 and 75, 76.

project for the improvement of the Rajahmundry district, of which the construction of the Godavery Annicut was the first step, and to which the approval of the Honourable Court has already been accorded. Godavery Annicut.

(signed) *H. C. Montgomery,*  
 Fort St. George, 6 March 1851. Chief Secretary.

No. 551.

EXTRACT from the Proceedings of the Honourable the President of the Council of India in the Financial Department, under date the 11th April 1851. No. 30.

READ a communication from the Home Department, No. 119, dated the 8th ultimo, forwarding for consideration and orders a despatch from the Government of Fort St. George, No. 123, dated the 8th February last, with enclosures, soliciting early sanction to a further outlay of Rs. 65,742. 4. for extending the Vejaswaram branch of the Godavery Annicut.

RESOLUTION.

As the outlay of Rs. 65,742. 4., for which sanction is now solicited, is shown to be a matter of necessity, the President in Council is pleased to authorize it, in anticipation of the confirmation of the Honourable the Court of Directors.

ORDER.

Ordered, that a copy of the foregoing resolution be forwarded to the Home Department for communication to the Government of Fort St. George, and that the original papers be returned, copies being kept for record.

(A true extract.)

(signed) *J. Dorin,*  
 Secretary to the Government of India.

No. 237.

Copy of the foregoing forwarded to the Government of Fort St. George, with reference to Chief Secretary Sir H. C. Montgomery's letter, No. 123, dated 8th February last, the original enclosures of which are herewith returned.

(signed) *F. J. Halliday,*  
 Secretary to Government of India.

Fort William, Home Department,  
 24 April 1851.

No. 434.

THE Governor in Council apprehends that the sanction of the Government of India has been received too late to admit of the extension of the Vejaswaram dam being undertaken during the small remaining portion of the present working season; and as it is possible that the civil engineer may find, after the freshes have subsided, that his plan may require modification, and as the Government have already sanctioned an advance of 10,000 rupees on account of the additional work now authorized by the Government of India, which it is hoped will have enabled the civil engineer to do what was immediately necessary, it is deemed proper to await a further report from the Board of Revenue and civil engineer before authorizing the actual disbursement of any further portion of the estimate for extending the Vejaswaram dam. No. 31.

(signed) *T. Pycroft,*  
 Secretary to Government.

Fort St. George, 6 May 1851.

Godavery Annicut. EXTRACT Revenue Letter from Fort St. George, dated 7 June (No. 27) 1852.

1. WE have the honour to address you, in continuation of our letter dated 25th October 1851 (No. 60), and to submit, for the information of your Honourable Court, copy of the correspondence \* which has since passed on the subject of the further works undertaken in connexion with the Godavery Annicut, in the district of Rajahmundry.

2. It will be seen that, in furtherance of the great scheme of artificial irrigation, of which the annicut is the basis, we have, on the strong recommendation of the local officers and the Board of Revenue, obtained the sanction of the Government of India to two projects for the irrigation of the right and left banks of the Godavery, at an estimated expenditure of Rs. 1,38,646. 15. 5. and Rs. 1,76,357. 0. 5. respectively. These projects consist of a system of channels taken off from the great ducts, with the usual auxiliary works of masonry, and are indispensably necessary to the full development of the benefits anticipated from the annicut. It will be observed that it is not intended to attempt to complete these works in the present season, but only to carry out such as promise to yield a speedy return.

Cons., 24 Dec. 1850, Nos. 24 to 26.  
Cons., 4 March 1851, Nos. 37, 38.

3. The Government of India have further sanctioned an establishment of three second assistant civil engineers, three maistries, and 12 Lascars, at a monthly charge of 747 rupees, for a period of three years, to carry forward the project of irrigation from the annicut, and to meet the wants of the civil engineer's department for the first division.

4. We have also applied to that Government for sanction to a supplemental estimate of 29,600 rupees, recommended by the Board of Revenue, for completing the Muddoor division of the annicut with Cyclopean stone, and for iron posts and planks for increasing the height of the dam, in lieu of the masonry wall proposed by the committee. The circumstances under which it has been found necessary to submit this estimate are fully detailed in the correspondence recorded in our Consultations of the 23d December and 2d March last, and under the explanation there afforded we have authorized an advance of 10,000 rupees to enable the civil engineer to complete the Cyclopean part of the work.

Cons., 4 November 1851, Nos. 18 to 22; 24 February 1852, Nos. 11 to 17; 27 April 1852, Nos. 55, 56.

5. We transmit also copy of the correspondence noted in the margin relative to a project submitted by the Board of Revenue for draining a large tract of land to the east of the Colavi Lake, in the district of Masulipatam, at an estimated expense of Rs. 66,060. 10.

6. The project was brought to our notice in September last, and was deferred for future consideration, on the grounds of the extensive works engaging the attention of the civil engineer, and the large outlay which their execution involved; but under the very urgent representations made by that officer, as recorded in our Consultation of the 24th February last, and as the work in question was represented to be a necessary part of the project connected with the Godavery Annicut, we authorized an advance of 10,000 rupees to enable him to commence operations, and subsequently applied to the Government of India, and obtained their sanction to the full amount of the estimated outlay which, it will be observed, will not be expended in one season.

Cons., 15 April 1851, Nos. 34, 35; 6 May 1851, Nos. 26, 27; 27 May 1851, Nos. 47, 48; 24 Feb. 1852, Nos. 1, 2; 2 March 1852, Nos. 22, 23.

7. With reference to paras. 2 to 4 of our despatch in this department, dated 5th February 1852 (No. 8), we beg to forward copy of a further correspondence with the Board of Revenue relative to the subject of

improving the line of navigation by the Thooliah Bagah Channel from the village of Arataculta to Coovoor, and constructing a new lock and calingulah at the junction of the channel with the Cotha Calwah, and another calingulah across the Yelairoo River, in the Rajahmundry district.

8. In submitting an estimate of the cost of the proposed works, the Board of Revenue stated that two locks were erected at Chintapully and Covoor in 1849-50 for rendering the Thoolia Bagah navigable, but that the lower lock being built not far below the junction of the Yelairoo River, with the channel, was much damaged

\* Cons., 9 December 1851, Nos. 19 to 25; 9 December 1851, Nos. 26 to 31; 16 March 1852, Nos. 4 to 6; 10 February 1852, Nos. 28, 29; 23 December 1851, Nos. 41, 42; 2 March 1852, Nos. 15 to 21; 25 May 1852, Nos. 12, 13; 23 March 1852, Nos. 13 to 15; 11 May 1852, Nos. 17 to 20; 4 May 1852, Nos. 31, 32; 11 May 1852, Nos. 25, 26.

damaged by freshes from the hills last year, and its calingulah for the discharge of the waste water swept away. To guard these works, in their present situation, against future injuries from the same cause, it was proposed to separate the Thooliah Bagah from the Yelairoo, and at the same time to shorten the line of navigation by cutting for it a new and straight course from Aratacutta to Coovoor. Godavery Annicut.

9. Though we approved of the proposed improvement in our Minutes of Consultation of the 15th April 1851, we were of opinion that it should be deferred for a future time, in consideration of the very extensive and more important irrigation works in progress in the district; but under the strong representations subsequently submitted by the civil engineer of the serious importance of the work as an essential part of the whole Godavery project, and the urgent solicitation of that officer for early sanction, we resolved to authorize the estimated outlay, amounting to Rs. 9,938. 6. 8., after deducting the cost already sanctioned, of constructing a calingulah across the Yelairoo, and of ordinary work to the Cotha Calwah, which, we observed, might be executed like other usual works, under an ordinary estimate for the year. In para. 27 of our despatch, 10th March 1852, No. 14, we informed your Honourable Court that we had obtained the sanction of the Government of India for the employment of a fixed establishment at a monthly charge of 54 rupees, for working the locks in the Thoolia Bagah Channel.

10. The Board of Revenue subsequently laid before us a letter from the Collector of Rajahmundry, with an ordinary estimate prepared by the civil engineer for repairing and improving this channel and the works connected with it in the present season, and recommended for sanction the proposed expenditure of Rs. 13,138. 8. 8. We resolved, however, to defer granting our sanction to any further outlay on account of these works until the information called for in our Minute of Consultation of the 18th February last was furnished.

No. 1,220.

From Sir *H. C. Montgomery*, Bart., Chief Secretary to the Government of Fort St. George, to *F. J. Halliday*, Esq., Secretary to the Government of India.

Sir,

I AM directed by the Right honourable the Governor in Council to forward, for submission to the Government of India, copies of the communications noted in the margin,\* relative to two projects for the irrigation of the right and left banks of the Godavery, at an estimated expense of Rs. 1,38,646. 15. 5. and Rs. 1,76,357. 0. 5. respectively.

No. 31.

\* See below.

2. The advantages of the project for the irrigation of the land on the right bank of the Godavery having been forcibly represented, and its execution strongly recommended both by the local officers and the Board of Revenue, the Governor in Council, under the emergency of the case, and in consideration of the reasons set forth in the concluding para. of the Minutes of Consultation of this date, has been induced to sanction the outlay for carrying it into effect, in anticipation of the approval of the Government of India.

3. In regard to the project for the irrigation of the left bank of the Godavery, the Governor in Council regarding it also as indispensably necessary to the full development of the benefits anticipated from the annicut, has authorized an advance of 30,000 rupees upon the estimate, and desires me to solicit the sanction of the Government of India to the total amount required; viz. Rs. 1,76,357. 0. 5.

(signed) *H. C. Montgomery*,

Chief Secretary.

Fort St. George, 9 December 1851.

MINUTE by the Right Honourable the President.

No. 27.

LETTER from the Secretary to the Revenue Board, Department Public Works, No. 1,326, dated 17th November, with Estimates of Works of Irrigation, connected with the Godavery Annicut on the left bank of that river.

I HAVE

\* From Board of Revenue, 25 September 1851, No. 787; Extract Minutes Cons., 9 December 1851, No. 1,215; From Board of Revenue, 17 November 1851, No. 945; Extract Minutes Cons., 9 December 1851, No. 1,219.



Godavery Annicut. I HAVE very carefully read the above letter and its accompaniments, and also minutely examined the map and plans.

So far as it is possible for any one ignorant of the localities, and also of the scientific knowledge which is required, to clearly understand the application of the different works proposed by the civil engineer of the 1st division, to pronounce on the projects here submitted, I am of opinion, that they are indispensably necessary to the full development of the benefits anticipated from the Godavery Annicut, and as I presume, for the reasons assigned in my minute\* of yesterday's date, that the expense to be incurred on them is included in the general approval of this vast undertaking by the Honourable Court, I propose that an advance of 30,000 rupees be at once authorized, and that an application be forthwith made to the Government of India for sanction to the total sum.

29 November 1851.

(signed) *Henry Pottinger.*

MINUTE by the Honourable Mr. *Elliott.*

No. 28. I CONCUR. I observe by the Collector's letter, it is not intended "to attempt to complete these works in the approaching season," but only to carry out such as promise to yield a speedy return, which is very judicious.

29 November 1851.

(signed) *D. Elliott.*

MINUTE by the Honourable Mr. *Thomas.*

No. 29. I AGREE; and I would make this indispensable, and require a further report, showing what portions of the work are to be, and what are not to be now completed.

1 December 1851.

(signed) *J. F. Thomas.*

No. 1,219.

NOTE by the Chief Secretary.

No. 30. Para. 1. IN the foregoing letter, the Board of Revenue solicit sanction to an estimate amounting to Rs. 1,76,357. 0. 5. for the irrigation of the country on the left bank of the Godavery, the project consisting, like those submitted for the right bank and the delta, "of a system of channels taken off from the great ducts, with the usual auxiliary works of masonry;" and request an advance of 30,000 rupees, to enable the civil engineer to make preparations.

2. The Right honourable the Governor in Council having carefully read the above letter and its accompaniments; is of opinion, that the works recommended are indispensably necessary to the full development of the benefits anticipated from the Godavery Annicuts; and, under this impression, authorizes an advance of (30,000) thirty thousand rupees, as requested, and resolves to submit an application to the Government of India, soliciting their sanction to the total amount of the estimate.

3. The Governor in Council observes from the Collector's letter, that it is not intended to attempt to complete these works in the approaching season, but only to carry out such as promise to yield a speedy return. This appears to be judicious; and the Government are of opinion, that this course should be most carefully and rigidly followed. The Governor in Council desires that a report may be submitted, showing what portions of the work are to be, and what are not to be now completed.

(signed) *H. C. Montgomery,*  
Chief Secretary.

Fort St. George, 9 December 1851.

EXTRACT Fort St. George Revenue Diary to Consultation of 16 March 1852.

RECEIVED the following:—

No. 304.

No. 5. Extract from the Proceedings of the Most Noble the Governor-General of India in Council in the Financial Department, under date 4 February 1852.

Read an endorsement from the Home Department, No. 682, dated 29th December 1851, forwarding for consideration and orders a despatch from the Government of Fort St. George, No. 1,220 of the 9th idem, with enclosure, soliciting

\* Letter from the Board of Revenue, dated Prince of Wales' Island, No. 1,143, of 25 Sept. 1852.

soliciting sanction to two projects for the irrigation of the right and left banks of Godavery Annicut. the Godavery Annicut.

## RESOLUTION.

The Governor-general in Council observes, that it is proposed to undertake two projects for the irrigation of the right and left banks of the Godavery Annicut in the district of Rajahmundry, at an estimated expenditure of Rs. 1,38,646. 15. 5., and Rs. 1,76,357. 0. 5.\* respectively, and as these works are in furtherance of the great scheme of artificial irrigation of which the annicut is the basis, his Lordship in Council is pleased, on the recommendation of the Government of Fort St. George, to accord his sanction to the expenditure, aggregating Rs. 3,15,003. 15. 10.

## ORDER.

Ordered, that a copy of the foregoing resolution, Copy of a letter from the Government of Fort St. George, No. 1,220, dated 9 December 1851; seven together with the papers noted in the margin, be forwarded to the Home Department for communication original papers. to the Government of Fort St. George.

(A true extract.)

(signed) *J. Dorin,*  
Secretary to the Government of India.

## No. 191.

COPY of the foregoing forwarded to the Government of Fort St. George, with reference to Chief Secretary Sir H. C. Montgomery's letter, No. 1,220, dated 19th December last. The original enclosures and plans are herewith returned.

By Order of the Governor-General in Council.

(signed) *A. R. Young,*  
Under Secretary to Government of India.

Fort William, Home Office,  
2 March 1852.

## No. 246.

ORDERED to be communicated to the Board of Revenue in the Department of Public Works, with reference to the correspondence noted in the margin,† and also to the Office of Account and Audit. No. 6. † See below.

(signed) *H. C. Montgomery,*  
Fort St. George, 13 March 1852. Chief Secretary.

\* Estimate for the probable expense for works required in the central tract or delta, that is, the part lying between the two main branches of the Godavery, in the district of Rajahmundry, for the year 1851 - - - - - Rs. 1,38,646 15 5

Estimate of the expense required on account of irrigation works in connexion with the Godavery Annicut, on the east side of the river, in the district of Rajahmundry - - - - - 1,76,357 - 5

Rs. 3,15,003 15 10

† From Board of Revenue, Department Public Works, dated 25 September 1851, No. 787; Extract Minutes of Cons., 9 December 1851, No. 1,215; From Board of Revenue, Department Public Works, dated 7 November 1851, No. 945; Extract Minutes of Cons., 9 December 1851, No. 1,219; Extract Proceedings, Department Public Works, dated 23 February 1852, No. 146.

Godavery Annicut.

No. 196.

From Sir *H. C. Montgomery*, Bart., Chief Secretary to the Government of Fort St. George, to *J. F. Halliday*, Esq., Secretary to the Government of India.

Sir,

No. 21.

• See below.

I AM directed by the Right honourable the Governor in Council to forward, for the consideration of the Government of India, the communications noted in the margin,\* regarding a supplemental estimate, amounting to 29,600 rupees, for completing the Muddoor division of the Godavery Annicut in the Rajahmundry district.

2. The circumstances under which it has been found necessary to submit the present estimate, are fully detailed in the correspondence now submitted, and under the explanation now afforded, the Right honourable the Governor in Council has authorized an advance of 10,000 rupees, to enable the civil engineer to complete the Cyclopean work of the Muddoor division of the annicut, and desires me to solicit sanction for the full amount of the estimate.

(signed) *H. C. Montgomery*,  
Chief Secretary.

Fort St. George,  
28 February 1852.

---

EXTRACT Fort St. George Revenue Diary to Consultation of 25 May 1852.

READ the following:—

No. 856.

No. 12. Extract from the Proceedings of the Most Noble the Governor-General of India, in Council, in the Financial Department, under date 30 April 1852.

Read an endorsement from the Home Department, No. 235, of the 27th ultimo, forwarding for consideration and orders, a letter from the Government of Fort St. George, No. 196, dated the 28th February, with enclosures, soliciting sanction to an estimate of 29,600 rupees, for completing the Muddoor division of the Godavery Annicut.

## RESOLUTION.

Under the circumstances of the case, and on the recommendation of the Government of Fort St. George, the Governor-general in Council is pleased to sanction the estimate of 29,600 rupees required for the completion of the Mudvoor division of the Godavery Annicut, in the district of Rajahmundry.

## ORDER,

Government of Fort St. George to Home Department, 28 February 1852, with seven original papers. Ordered, that a copy of the foregoing resolution be forwarded to the Home Department for communication to the Government of Fort St. George, and that the papers noted in the margin be returned.

(A true extract.)

(signed) *J. Dorin*,  
Secretary to the Government of India.

---

\* From Board of Revenue, 27 November 1851, with original Enclosures; Extract Minutes Cons., 22 December 1851, No. 1,273; From Board of Revenue, 3 January 1852, No. 3; From Board of Revenue, 5 February 1852, No. 105, with one original Enclosure; Extract Minutes Cons., 28 Feb. 1852, No. 195.

Godavery Annicut.

No. 175.

From Sir H. C. Montgomery, Bart., Chief Secretary to Government, Fort St. George, to F. J. Halliday, Esq., Secretary to the Government of India.

No. 17.

Sir,

I AM directed by the Right honourable the Governor in Council, to submit the correspondence noted in the margin,\* relative to a project for draining a large tract of land to the east of the Colair Lake, in the district of Masulipatam, at an estimated expense of Rs. 66,060. 10.

\* See below.

2. The project was brought to the notice of Government in September last, and was deferred for future consideration, on the grounds of the extensive works engaging the attention of the civil engineer, and the large outlay which their execution involved; but under the very urgent representations now made by that officer, which are fully recorded in an extract from the Minutes of Consultation of this date, the Governor in Council has been induced to sanction an advance of 10,000 rupees, to enable him to commence operations; and as the work in question is represented to be a necessary part of the works connected with the Godavery Annicut, the construction of which has received the approval of the Honourable Court, I am desired to request sanction to the full amount of the estimate, which it will be observed, will not be expended in one season.

I have, &c.  
(signed) H. C. Montgomery,

Fort St. George, 24 February 1852. Chief Secretary.

EXTRACT Fort St. George Revenue Consultation of 27 April 1852.

READ the following:—

No. 573.

No. 55.

Extract from the Proceedings of the Most Noble the Governor-General of India in Council in the Financial Department, under date 2 April 1852.

Read an endorsement from the Home Department, No. 219, dated the 22d ultimo, forwarding for consideration and orders a despatch, No. 175, of the 24th February last, from the Government of Fort St. George, with enclosures, soliciting sanction to a project for draining a large tract of land to the east of the Colair Lake, in the district of Masulipatam, at an estimated cost of Rs. 66,060. 10.

RESOLUTION.

Under the explanations submitted by the Government of Fort St. George, the Governor-general in Council is pleased to sanction the project for draining a large tract of land to the east of the Colair Lake, in the district of Masulipatam, at an estimated cost of Rs. 66,060. 10., as a part of the works connected with the Godavery Annicut.

ORDER.

Ordered, that a copy of the above resolution be forwarded to the Home Department for communication to the Government of Madras, and that the papers noted in the margin be returned. Copy of a letter from the Government of Madras to the Home Department, No. 175, dated 24 Feb. 1852; six original papers and one plan.

(A true extract.)

(signed) J. Dorin,  
Secretary to the Government of India.

\* From Board of Revenue, Department of Public Works, 25 September 1851, No. 779, with five original Enclosures; From Board of Revenue, Department of Public Works, 5 January 1852, No. 5, with two original Enclosures; Extract Minutes, 24 February 1852, No. 174, with Minutes of Government therein recorded.

Godavery Annicut.

No. 313.

COPY of the foregoing forwarded to the Government of Fort St. George, with reference to the Chief Secretary, Sir H. C. Montgomery's letter, No. 175, dated 21st February last, the original enclosures of which are herewith returned.

By order of the Governor-General in Council,

(signed) *A. R. Young,*

Under Secretary to Government of India.

Fort William, Home Department,  
13 April 1852.

No. 386.

No. 56.

ORDERED, that the sanction of the Government of India, conveyed in the foregoing proceedings, be communicated to the Board of Revenue, in the Department of Public Works, and to the Officers of Account and Audit, with reference to an extract from the Minutes of Consultation, dated 24th February 1852, No. 174.

(signed) *H. C. Montgomery,*

Chief Secretary.

Fort St. George, 27 April 1852.

EXTRACT Revenue Letter from Madras, dated 22 February (No. 13) 1853.

Cons., 1 June 1852, Nos. 6 to 9, 22 to 24, and 34 to 38; 13 July 1852, Nos. 5, 6; 7 September 1852, Nos. 53, 54; 17 September 1852, Nos. 34, 35.

Para. 1. In continuation of our letter in this department, dated 7th June 1852, No. 27, we have the honour to submit, for the information of your Honourable Court, copies of the correspondence recorded in the Consultations noted in the margin, having reference to the works on the Godavery, in the Rajahmundry district.

2. Your Honourable Court will observe that, with the exception of some trifling details, the works of the Godavery Annicut were reported in April last, to have been completed, and in excellent order generally, though improvements and alterations were stated to be requisite in different parts; and that in our proceedings of the 27th May following, we recorded our obligations to Colonel Cotton, Captain Orr, and the officers of the department under their orders, for their services on this occasion; intimating at the same time, that it would be an agreeable duty to bring the same to the notice of your Honourable Court; we also noticed the very valuable aid afforded during the progress of the work by Mr. Forbes, late sub-collector of Rajahmundry, by whose vigorous execution of the responsible duty assigned to him, the constant requirements of the Engineer Department was supplied, and by whose judicious arrangements, order and regularity were preserved among the vast assemblage of artizans and labourers congregated at Dowlaishwarum.

Cons., 24 August 1852, Nos. 32, 33; Diary, 17 Sept. 1852, No. 45, 46; Cons. 9 November 1852, Nos. 35, 36; 7 January 1853, Nos. 31, 32; Diary, 14 Jan. 1853, Nos. 20 to 23.

3. On the 7th August, the civil engineer reported through the Board, that a very high fresh in the Godavery, had done considerable injury to the works on the western side of the river, and roughly estimated the losses at 10,282 rupees. We regretted the damage

thus done, and expressed our reliance on the exertions of the engineer and revenue officers of the district in securing their early repair, and desired that a further report of the condition of the works should be furnished after the expected September freshes had subsided. This has been furnished, and the result has been shown to be satisfactory. It will be observed, that in consideration of the injuries sustained by the lock at Vyjeeswarum, hitherto in use, and the sluices adjacent, it has been deemed advisable, not only for the security of the old works, but also with the view of keeping open the navigation of the Godavery River, to erect a new lock in a more convenient position, rather than reconstruct the lock injured by the late floods; and that the cost has been estimated at Rs. 17,876. 5., which was sanctioned by us under date the 8th January 1853.

4. We have now to draw your attention to the communications from the Board of Revenue and chief engineer, and to the minutes of the members of Government,

ment, recorded in our Consultation of the date noted in the margin, on the subject of an application for a further expenditure of 71,382 rupees upon works on the right bank of the Western Godavery, upon which the Government of India had previously, in 1849, sanctioned a disbursement of 76,396 rupees. Your Honourable Court will observe that, deeming the information before us insufficient for a further application being made to that Government, and entertaining doubts of the expediency and value of the great extension given to the channels for navigation, which, contrary to what was originally contemplated when the project of the annicut was proposed and sanctioned, seemed, from the papers before us, to be now treated in a great degree as the paramount object, we have resolved, with a view of arriving at a correct conclusion on the subject, to call for further and full particulars as to the number of works or projects subsidiary to the annicut, in hand, the outlay on each of them to the present period, and the estimated further cost to complete each project, with other particulars, as the extent of land brought for the first time under irrigation by those works, and the means and capabilities of the ryots to take up this land and bring it under profitable culture, with the total contemplated outlay in this district. Meanwhile, we informed the Board that we were not prepared to sanction any further outlay except for the completion of works on hand exclusively for the purposes of irrigation, and for which alone we required them to submit estimates when replying to our requisition.

Godavery Annicut.  
Diary to Cons.  
14 January 1853,  
Nos. 1 to 19, and  
75, 76.

We have since received a communication from the Board, in reply to extract Minutes of Consultation of the 8th January last, but we did not consider the information afforded in it to be of a nature that would authorize the sanction of any advances on account of the works referred to, and we resolved, therefore, to await the receipt of the fuller report called for in paras. 4 and 5 of extract Minutes of Consultation, 14 January 1853, No. 47.

Cons., 8 February  
1853, Nos. 21, 22.

EXTRACT Revenue Letter from Fort St. George, dated 24 June (No. 34) 1853.

Para. 1. We have the honour to submit, in continuation of our letter in this department, dated 22 February last, No. 13, copies of the correspondence recorded in the Consultations noted in the margin, having reference to the Godavery Annicut in the Rajahmundry district, and works subsidiary to it.

Diary, 22 February 1853, Nos. 3, 4; 4 March 1853, Nos. 1, 2, 46 to 50; 1 April 1853, Nos. 4 to 13; 5 April 1853, Nos. 1, 2; 20 May 1853, Nos. 1 to 8; 19 April 1853, Nos. 12, 13.

2. We beg to refer your Honourable Court to our resolution of the 24th March last, No. 336, as showing that the actual charge incurred from 1847 to 1852 in the construction of the Godavery Annicut, has been Rs. 9,09,831. 6. 8., besides Rs. 12,330. 0. 11. on account of Cyclopean work of the Muddoor division of the annicut, separately sanctioned, and that the disbursement, though in excess of the original estimate by 4,34,079 rupees, was still 1,378 rupees below that computed by the Godavery Committee as necessary for the completion of the work.

3. Your Honourable Court will observe, from the proceedings of the Board of Revenue in the Department of Public Works, dated 27th January 1853, that a sum of Rs. 44,389. 5. 4. was passed, chiefly an ordinary estimate for general repairs to the Godavery Annicut, and for clearing, repairing and extending old drainage channels, and that at a subsequent date we sanctioned an occasional estimate for Rs. 1,958. 3., for a bund and sluice at the junction of the Oodoo Calwah with the right bank of the Godavery above the annicut, which was represented to be necessary.

4. Having, since the date of the last letter, received from the Board of Revenue satisfactory particulars of the works subsidiary to the annicut in hand, and the further outlay required to complete them, we authorized a present advance of 50,000 rupees for the prosecution of the works, and subsequently sanctioned, subject to the confirmation of the Government of India, the expenditure required on that account, amounting to Rs. 2,17,806. 0. 1, as shown in the margin.\*

	Rs.	a.	p.
* For Works on the right bank	72,734	2	5
Ditto on ditto	1,36,054	1	9
Ditto on left bank	3,905	7	10
Ditto, completing annicut	5,118	4	8
	<u>Rs. 2,17,806</u>	0	1

Godavery Annicut.

No. 340.

No. 11.

From Sir *H. C. Montgomery*, Bart., Chief Secretary to Government, to  
*J. P. Grant*, Esq., Secretary to the Government of India.

Sir,

To Government of  
India, 9 Dec. 1851,  
No. 1,220; from  
Government of  
India, 2 March  
1853, No. 304.

WITH reference to the papers noted in the margin, I am directed by the Right honourable the Governor in Council to forward, for submission to the Government of India, copy of a letter from the Board of Revenue in the Department of Public Works, and its original enclosures, upon the Nagarum aqueduct work, and the others included in the project of irrigation for the delta of Rajahmundry, and on the further expenditure required to complete them, together with an extract from the Minutes of Consultation of this day's date, containing the views of Government on the application.

2. The sanction granted by the Government of India for these works, in their Proceedings in the Financial Department, dated 14th February 1852, amounted to Rs. 1,38,646. 15. 5., and the further expenditure now required for their completion, is shown, in the supplemental estimate submitted by the Board of Revenue, to be Rs. 1,25,320. 8. 9. Under the circumstances detailed in these papers, the Governor in Council had no alternative but to sanction the estimate, and to report the proceedings for the confirmation of higher authority, and he regrets that the unauthorized proceedings of the local officers should have forced him to anticipate the orders of the Government of India, by directing an advance of such an amount as may be immediately necessary for the preparation of materials, and for carrying on such of the works as will admit of no delay.

I have, &c.  
(signed) *H. C. Montgomery*,

Fort St. George, 24 March 1853.

Chief Secretary.

No. 536.

From Sir *H. C. Montgomery*, Bart., Chief Secretary, to *J. P. Grant*, Esq.,  
Secretary to the Government of India.

Sir,

No. 8.

Extract Minutes Cons., 4 March 1853, No. 249,  
with all the papers included in it; Extract Minutes  
of Cons., 14 May 1853, No. 535, with all the papers  
included in it.

IN continuation of my letter, dated 24th March last, No. 340, I am directed by the Right honourable the Governor in Council to forward, for submission to the Government of India, extracts from the Minutes of Consultation, of the dates noted in the margin, together with the correspondence from the Board of Revenue in the Department of Public Works, and minutes of the members of Government recorded thereon, with statements and a map of the Delta therein referred to, relating to the expenditure already incurred on the subsidiary irrigation and navigation works of the Godavery Annicut, and the further outlay required to complete them.

2. The Government of India will observe, that of the total further expenditure, estimated at Rs. 2,17,806. 0. 1., the sum of Rs. 1,25,320. 8. 9. has already been sanctioned by this Government, as reported in my letter of the 24th March, besides the small additional sum of Rs. 5,113. 6. 5, on account of iron posts and shutters on the Godavery Annicut; and that, under the circumstances detailed in the resolutions of Government now transmitted, the Governor in Council has been induced to accord his sanction for the remaining expenditure of Rs. 87,372. 0. 11, and he requests that the proceeding may be confirmed by the Government of India.

3. I am also directed to forward the papers entered in the margin,\* which will afford the Government of India any further information they may desire respecting the earlier discussions which have taken place on the subject under reference.

(signed) *H. C. Montgomery*,

Fort St. George, 14 May 1853.

Chief Secretary.

\* Extract Minutes Cons., 8 January 1853, No. 31, with all the papers and minutes recorded in it; Extract Minutes of Cons. 14 January 1853, No. 47, with papers; Extract Minutes of Cons., 8 February 1853, No. 154, with papers; Minutes of the Members of Government recorded on letter from Board of Revenue, 7 February 1853, forwarded to Government of India on the 24th March last.

Trivady Annicut.

## Trivady Annicut, across the Guddalum, in South Arcot.

EXTRACT Revenue General Letter from Madras, dated 15 Nov. (No. 54) 1847.

Para. 8. FROM the correspondence noted in the margin, your Honourable Court will learn that in compliance with our recommendation, the Government of India have sanctioned the construction of a new annicut across the Guddalum River in South Arcot, at an estimated cost of Rs.14,806. 7. 8½. It will be observed, that a work of the same description was constructed in the year 1838, but from the injudicious selection of the site, it soon failed. The position selected for the proposed new annicut and recommended by the Board of Revenue, is stated to be very favourable for collecting the spring water which in the dry season is found between it and the site of the old annicut, and will also save the ryots the labour of keeping clear any new channel. The execution of the project will, it is also expected, afford facilities for the growth of sugar-cane upon the large extent of 1,397 cawnies at present uncultivated for want of water, and lead to an increase of revenue to the amount of 10,000 rupees.

Cons., 15 Sept.  
1846, Nos. 9 to 12;  
Cons., 3 Nov. 1846,  
Nos. 75, 76.

No. 920.

From *E. P. Thompson*, Esq., Secretary to Government, to *G. A. Bushby*, Esq., Secretary to the Government of India.

Sir,

Para. 1. I AM directed by the Most Noble the Governor in Council, to request you will submit to the Government of India the accompanying copy of a letter from the Board of Revenue in the Department of Public Works, with its several original Enclosures,\* on the subject of constructing a new annicut across the Guddalum River, in the district of South Arcot, at an estimated cost of Rs.14,806. 7. 8½.

No. 11.

2. It will be observed from the review taken by Government of these papers, that a work of the same description was constructed in the year 1838, but that from an injudicious selection of the site it soon failed. For a few years the annicut produced an increase in the cultivation, but the revenues deteriorated afterwards, and the work eventually breached. The repair of the work is estimated at 5,181 rupees, but from the faultiness of its site and the inconveniences which have since attended it, such an outlay would be a waste of public money, and the Government did not consider that the plan advocated by a late engineer officer, of recurring to the old plan of raising temporary earthen dams, would be attended with any effectual advantage.

Extract Minutes  
Cons., 11 Sept.  
1846, No. 919.

3. The ryots of South Arcot appear very desirous of extending the cultivation of sugar-cane, and it is stated that 1,397 cawnies of waste land could, with a sufficient supply of water, be made productive, at an annual increase to the revenue of 10,000 rupees. Messrs. Parry & Co. are also prepared to establish a sugar factory and to engage the ryots to plant 300 cawnies of Mauritius sugar-cane, if assured that such an annicut will be constructed as will insure their crops against the chance of ruin, to which the breaking of the earthen bunds exposes them.

4. The position selected for the proposed new annicut, and recommended by the Board of Public Works, is satisfactory to all parties, and every security appears to have been taken that the work shall be solid and effective. His Lordship in Council, therefore, strongly recommends the undertaking to the favourable consideration of the Government of India, and requests that sanction may be granted for its prosecution at the estimated disbursement of Rs.14,806. 7. 8½.

5. As it is important that no check should be offered to the cultivation of sugar when

\* Dated 22 June 1846, No. 393; with one plan, one estimate, one sketch, one drawing for January 1842; two letters, with nine enclosures.



Trivady Annicut. when the merchants are so eager to encourage its growth, and are so ready to do every justice to the ryots, his Lordship in Council further requests that the Orders of the Government of India may be communicated at an early period.

(signed) *E. P. Thompson,*  
Secretary to Government.

Fort St. George,  
11 September 1846.

Home Department, No. 681.

From *G. A. Bushby*, Esq., Secretary to the Government of India, to  
*E. P. Thompson*, Esq., Secretary to Government, Fort St. George.

Sir,

No. 75-

I AM directed to acknowledge the receipt of your letter, No. 920, dated the 11th ultimo, with original enclosures, and in reply to state, that for the reasons therein alleged, and in compliance with the recommendation of the Most Noble the Governor in Council, the President in Council is pleased to sanction the proposed construction of a new annicut across the Guddalum River, in the district of South Arcot, at an estimated cost of Rs.14,806. 7. 8½.

(signed) *G. A. Bushby,*  
Fort William, 10 October 1846. Sec. to the Govt. of India

EXTRACT Fort St. George Revenue Diary to Consultation, 6 June 1848.

No. 588.

From Sir *H. C. Montgomery*, Bart., Secretary to Government, to *G. A. Bushby*, Esq., Secretary to the Government of India.

Sir,

No. 11.

WITH reference to your letter, dated 10th October 1846, conveying sanction for the construction of a new annicut across the Guddalum River, in South Arcot, at a cost of Rs.14,806. 7. 8½, I am directed by the Right honourable the Governor in Council, to report, for the information of the Right honourable the Governor-general of India in Council, that in consequence of inaccuracies in the data of the original estimate, and certain unforeseen expenses, the above amount has been found inadequate, and that a further expenditure of Rs.3,052. 11. 9. has been authorized by this Government for the completion of the work, making the total cost Rs.17,859. 3. 5.

Fort St. George,  
1 June 1848.

(signed) *H. C. Montgomery,*  
Secretary to Government.

EXTRACT Revenue Letter from Fort St. George, dated 23 Sept. (No. 72) 1848.

Diary, 6 June 1848,  
No. 9 to 11; Cons.,  
11 July 1848, Nos.  
27, 28.

4. In para. 8 of our despatch in this department, dated 15th November 1847, No. 54, we informed your Honourable Court that we obtained the sanction of the Government of India for the construction of a new annicut (the Trivady) across the Guddalum River, in South Arcot, at an estimated cost of Rs.14,806. 7. 8½.

5. We now transmit a further communication from the Board of Revenue, submitting a revised estimate for the completion of the annicut, amounting to Rs.17,859. 3. 5, and explaining, in detail, the necessity for this increase of expenditure. Under this representation we had no alternative but to sanction the extra outlay of Rs. 3,052. 11. 9. required for the work, and in doing so we expressed our dissatisfaction at the deficiencies of the original estimate. The Supreme Government to whom we reported our proceedings have, it will be seen, confirmed this additional grant.

FOR PUBLIC WORKS IN MADRAS, 1847 TO 1853.

35

EXTRACT Fort St. George Revenue Consultation, 11 July 1848.

Trivady Annicut.

No. 458.

From G. A. Bushby, Esq., Secretary to Government of India, to Sir H. C. Montgomery, Secretary to the Government, Fort St. George.

Sir,

I AM directed to acknowledge the receipt of your letter, No. 538, dated 1st instant, and in reply, to state that for the reasons therein alleged, the Governor-general in Council confirms the sanction granted by the Right honourable the Governor in Council, for a further expenditure of Rs. 3,052. 11. 9, for the completion of the new annicut authorized to be constructed across the Guddalum River in South Arcot, by my letter of 10th October 1846, at an estimated cost of Rs. 14,806. 7. 8½.

No. 27.

Fort William,  
17 June 1848.

(signed) G. A. Bushby,  
Secretary to the Government, India.

EXTRACT Revenue Letter to Fort St. George, dated 22 August (No. 9) 1849.

11. We observe that this work, from which an increase of revenue to the extent of 10,000 rupees per annum is expected, has received the sanction of the Government of India. Letter from, dated 15 November (No. 54) 1847; para. 8; also paras. 4 and 5 of Letter dated 22 September (No. 72) 1848; Construction of an annicut across the Guddalum River, in South Arcot, authorized, at an estimated cost of Rs. 17,859. 3. 5.

Vellaur Annicut.

Vellaur Annicut.

EXTRACT Revenue Letter from Madras, dated 28 April (No. 34) 1848.

7. In para 7 of our letter of the 15th November 1847, No. 54, we informed your Honourable Court of the additional estimates sanctioned by us for minor works of irrigation, connected with the Vellaur Annicut, which were recommended by the Board of Revenue for immediate execution. We now transmit copies of further communications from the Board reporting the sums disbursed in excess of the authorized outlay, and soliciting sanction to a supplemental estimate for completing the annicut, and for sundry improvements and subordinate works amounting to Rs. 15,305. 10. 3. Vellaur Annicut in South Arcot; Cons, 28 March 1848.

8. It will be observed, that in addition to the sums already authorized, and to the further amount applied for by the Board, there will still be Rs. 16,448. 12. 10. expended without sanction, thus making altogether a sum of Rs. 98,709. 0. 6. for a work originally estimated to cost only Rs. 56,877. 5. 1, and sanctioned by your Honourable Court at this charge.

9. In sanctioning the additional sum requested by the Board for the completion of the annicut, which we were induced to do under the expectation that it would ultimately prove a profitable work, we recorded our strong censure of the very unsatisfactory manner in which the plan and estimate were prepared by the local professional officers, and further remarked that the Board were not wholly exonerated from blame in having submitted them to Government without sufficient scrutiny. We also desired the Board to require the civil engineer to furnish, without delay, a full explanation of the causes of the large excess of expenditure, and to lay it before Government, with their own opinion upon it.

Villaur Annicut.

EXTRACT Revenue Letter to Fort St. George, dated 22 August (No. 9) 1849.

Letter from, dated 15 November (No. 54) 1847; para. 7; also paras. 7 to 9 of Letter dated 28 April (No. 34) 1848; Repairs to works of irrigation in certain districts authorized.

7. THE only point which requires observation in these proceedings is that which relates to the Vellaur Annicut in South Arcot.

8. In our despatch of the 24th December (No. 32) 1844, we sanctioned the construction of an annicut and bridge across the Vellaur River, at an estimated cost of Rs. 63,599. 6. 7, it now appears that more than that sum has been already expended, and that a total expenditure of Rs. 98,709. 0. 6, will be required to complete the work.

9. You have very properly called on the Board of Revenue to require from the civil engineer a full explanation of the causes of this large excess of expenditure above the estimate, and to lay it before you, with their own opinion on it.

10. It is satisfactory to us to observe, that even at this enhanced cost, the work is likely to be a profitable one, as the Collector of South Arcot reports that the increase of revenue in the talook of Boonagherry in consequence of

In Fusly 1255 -  
In Fusly 1256 -

Rs. 7,512 the construction of the annicut, had been no less than 34,235 rupees in  
26,723 the two last Fuslies.

Dams across the  
Cauvery and  
Vennaar.

## Dams across the Heads of the Cauvery and Vennaar.

EXTRACT Revenue General Letter from Madras, dated 20 Nov. (No. 83) 1848.

Dinry Cons.,  
22 August 1848,  
Nos. 1, 2; 3 Oct.  
1848, Nos. 42, 43;  
5 Sept. 1848, Nos.  
35, 36.

Para. 7. AT our consultation of the 22d August last, the Board of Revenue laid before us a correspondence with the revenue and engineer authorities of Tanjore, together with a plan and estimate for the construction of regulating dams at the point of separation of the Cauvery and Vennaar Rivers in that district, at a cost of Rs. 49,924. 3; and with reference to the object and advantages of the proposed works, strongly supported the recommendation of the local officers in favour of the project.

8. Concurring in opinion with the Board that the plan was well adapted to the object in view, of controlling and regulating the respective supplies of the rivers as may be required for irrigation, we recommended the proposition to the Government of India, and obtained their sanction for the estimated outlay.

9. It should be observed, that by the execution of the works, it is anticipated the necessity for annual remissions will be greatly avoided, and the expenses now annually incurred for temporary works will be reduced, so that the cost of the dams, though considerable, will be early repaid by their operation.

No. 888.

From Sir *H. C. Montgomery*, Bart., Secretary to Government, to *G. A. Bushby*, Esq.  
Secretary to the Government of India.

Sir,

No. 2.

Para. 1. I AM directed by the Right honourable the Governor in Council to request you will submit for the consideration of the Government of India the accompanying copy of a letter\* from the Board of Revenue in the Department of Public Works, with its several original enclosures, on a proposition to construct regulating dams across the heads of the Cauvery and Vennaar Rivers, in the district of Tanjore, at a cost estimated at Rs. 49,924. 3.

\* Dated 3 Aug.  
1848, No. 563, with  
10 enclosures and  
2 plans.

2. The object and advantages of the proposed works are too fully stated in the correspondence submitted, to need recapitulation. It may, however, be here briefly observed, that the Cauvery and Vennaar are the two branches by which nearly all Tanjore is irrigated; and the proposition to construct dams at the point where their waters separate, will place in the hands of the local officers the power of controlling and regulating the supplies of the rivers at low water, by which it is anticipated the necessity for annual remissions will be avoided, and the expenses now annually incurred for temporary works will be reduced; so that the cost of the proposed dams, though considerable, will be early repaid by their operation.

3. In

3. In the opinion of Government the plan appears to be well adapted to the proposed end of regulating the supply of the stream of each of the rivers as may be required for irrigation; and as it is strongly supported by the whole of the authorities who have been consulted respecting it, and by the Board of Revenue, and chief engineer, who is the professional adviser of the Board, the Governor in Council recommends the work for favourable consideration, and requests sanction for the expenditure.

Dams across the  
Cauvery and  
Vennaar.

4. I am desired also to bring to the notice of the Government of India, that the principle of the proposed work is not untried in Tanjore. The annicuts built in 1836 and 1846 at the head of the island of Seerungam, where the Coleroon branches from the Cauvery, for the object of controlling the river and regulating the supply of water to Tanjore and Trichinopoly, have been found fully to answer the expectations held out, of the advantages to be derived from their construction.

(signed) *H. C. Montgomery,*  
Fort St. George, 17 August 1848. Secretary to Government.

No. 720.

From *G. A. Bushby, Esq.,* Secretary to the Government of India, to Sir *H. C. Montgomery, Bart.,* Secretary to Government, Fort St. George.

Sir,

I AM directed to acknowledge the receipt of your letter No. 888, dated the 17th ultimo, with enclosures; and in reply to inform you, that the Governor-general in Council is pleased to sanction the proposition of the Board of Revenue in the Department of Public Works at Madras, to construct regulating dams across the heads of the Cauvery and Vennaar Rivers, in the district of Tanjore, at an estimated cost of Rs. 49,924. 3.

No. 42.

2. His Lordship in Council trusts; however, that careful provision will be made by the Government of Fort St. George for the exercise of their power discreetly and justly by the local officers, in regulating the respective supplies of these rivers.

(signed) *G. A. Bushby,*  
Fort William, Sec. to the Govt. of India.  
16 September 1848.

EXTRACT Revenue Letter to Fort St. George, dated 22 August (No. 9) 1849.

38. ALTHOUGH the cost of these works is considerable, we observe that you entertain a confident expectation that it will soon be repaid by the increased revenue that will arise from their operation.

Letter from, dated 20 November (No. 83) 1848; paras. 7 to 11; estimates amounting to Rs. 60,311. 11. for improvements to works of irrigation in Tanjore, sanctioned.

39. The principal portion of the expenditure, viz., 49,924 rupees, for constructing regulating dams at the point of separation of the Cauvery and Vennaar Rivers, has already received the sanction of the Government of India.

Kistna Annicut, at Bezoorah.

Kistna Annicut.

EXTRACT Revenue Letter from Fort St. George, dated 20 Nov. (No. 83) 1848.

15. We take this opportunity to submit, for the information of your Honourable Court, copies of the reports, with plans and estimates, laid before us by the Board of Revenue, relating to a project drawn up by Captain Lake, late civil engineer of the second division, assisted by Major Cotton, for the construction of an annicut across the Kistnah River at Bezoorah, for the benefit of the Guntoor and Masu-

Cons., 5 Sept. 1848  
Nos. 31, 32.

Kistna Annicut. lipatam districts, estimated at a cost of 5,02,639 rupees, as the present outlay ;  
 via.

For annicut, &c.	-	-	-	-	Rs. 4,02,639
For distribution of water	-	-	-	-	1,00,000

the eventual outlay requisite to give full effect to the annicut being estimated at 17 lacs of rupees.

16. Your Honourable Court will observe, that at the suggestion of the Board, we have referred the project to a committee of professional officers, who have been instructed to assemble on the spot, in conjunction with the Collectors of the two districts, early in the month of December, and carefully examine the plans and estimates both of expenditure and return, and report fully their opinion of them, of the feasibility of the project generally, and of the eligibility of the proposed site, or the advantages over it of any other they may consider preferable. On receiving their report, we shall bring the subject fully under the consideration of your Honourable Court.

EXTRACT Revenue Letter to Fort St. George, dated 22 August (No. 9) 1849.

42. We shall defer any consideration of this project until we shall have received the report of the committee which you have directed to assemble on the spot where the annicut is proposed to be constructed, for the purpose of examining the plans and estimates.

Letter from, dated 30 November (No. 83) 1848: (Paras. 15 and 16). Proposed construction of an annicut across the Kistnah River, at an estimated cost of Rs. 5,02,639, noticed.

You will instruct the Board of Revenue in the Department of Public Works, to be careful to avail themselves fully of the experience which has been gained during the progress of a similar work on the Godavery River; and we trust that your Government will satisfy yourselves, before submitting the proposal for our sanction, that all practicable means have been taken for avoiding errors and miscalculations similar to those which have occurred with reference to the latter work.

43. We further desire that the whole of the proceedings may be submitted to the Government of India, and their opinion may be obtained previously to the proposal being submitted for our sanction.

Revenue Department, No. 37, of 1849.

To the Honourable the Court of Directors of the East India Company.

Honourable Sirs,

Para. 1. In continuation of paras. 15 and 16 of our letter in this department, dated 20th November 1848, No. 83, we have now the honour to submit for your information, copy of the report of the committee appointed by us, "on the feasibility of constructing an annicut across the Kistna River, and thereby promoting the resources and welfare of the districts of Masulipatam and Guntoor," as well as an extract from the Minutes of Consultation, dated 20th July 1849, which will inform your Honourable Court of our views and proceedings in respect of this work.

Dated, 26 January, in Board's Letter, 30 April 1849; in Cons. 24 July 1849, Nos. 17 to 21. No. 68o.

2. Your Honourable Court will perceive that the project promised to be highly beneficial, not only with regard to augmentation of the revenues of the two districts, but as a means of preventing the calamities of famine with which the northern Circars (and Guntoor in particular) have been so grievously afflicted.

3. We have submitted our earnest recommendation in favour of the project to the Government of India, whose views will be laid before your Honourable Court as soon as they are communicated to us.

We have, &c.  
 (signed) Henry Pottinger.  
 D. Elliott.

Fort St. George, 20 July 1849.

Revenue Department, No. 681.

Kistna Annicut.

From Sir H. C. Montgomery, Bart., Secretary to Government, to F. J. Halliday, Esq., Secretary to the Government of India.

Sir,

Para. 1. I AM directed by the Right honourable the Governor in Council to transmit to you, for the purpose of being submitted for the consideration of the Government of India, copy of a report\* of a committee of engineer and revenue officers appointed by this Government "on the feasibility of constructing an annicut across the Kistna River, and thereby promoting the resources and welfare of the two districts of Masulipatam and Guntoor," together with the plans and estimates, &c., with which it was accompanied.

\* Dated 26 Jan. 1849, with estimate and eight plans, as per annexed list.

2. I am also desired to transmit copies of the minutes recorded on the project by the Right honourable the Governor and the Honourable Mr. Elliott, and to request the particular attention of the Supreme Government to them, as containing the views of this Government in detail on all the points touched upon by the committee, and an extract from the Minutes of Consultation of this day's date, as containing a summary of those views.

Dated 18 June and 4 July 1849. No. 680.

3. The Governor in Council requests that the original papers, surveys, &c., transmitted with this letter may be returned when no longer required.

(signed) H. C. Montgomery,  
Secretary to Government.

Fort St. George, 20 July 1849.

MINUTE.

Captain Lake's project for an Annicut across the Kistnah River, with former Proceedings, and Report of the Committee appointed by Minutes of Consultation of the 5th of September 1848.

On first reading Captain Lake's report, with those of the Collectors of Guntoor and Masulipatam, which were submitted to Government with the proceedings of the Board of Revenue of the 7th of August 1848, the impression I imbibed (and of which I made a note at the time) was, that the estimate framed by the former officer was far below the probable expense. This impression has, I see, been fully corroborated by the report of the committee, which has calculated the outlay on the annicut alone at (in round numbers) seven and a half lacs of rupees, being, as nearly as possible, seven-eighths (7/8) in excess of Captain Lake's first computation.

4,00,000  
7,50,000

Rs. 3,50,000

It was not, however, to the annicut alone that my apprehension of the inadequacy of Captain Lake's estimates extended. I fear he has under-rated the cost of all the subsequent improvements intended to give the annicut "full effect." On reference to his report, it will be observed that he allows only 1,000 rupees a mile for making roads, which seems to me far below the mark, and after the charges which I have seen sanctioned for channels, sluices, embankments, &c., in other places, I can place but little confidence in the sums he has put down.

Para. 31.

I am aware that the sums detailed in the para. which I have cited point to ulterior measures, and I find that the Board of Revenue in the Department of Public Works, in their proceedings handing up Captain Lake's report say, "probably not more than one lac (independent of repairs) will be required for the actual distribution of the waters upon the lands, exclusive of the delta, for some years. Thus the proposed present outlay will be—

Para. 30.

	Rs.
" For Annicut - - - - -	4,02,639
" Distribution of water - - - - -	1,00,000
	Rs. 5,02,639 "

But this is avowedly only a conjecture, and, moreover, does not include the delta, of the extent of which (in comparison with what it does include) I am necessarily ignorant. With these uncertainties, I confess it appears to me to be impossible to pronounce, with any degree of confidence, whether the annicut, when perfected according to Captain Lake's most enlarged plan, will have cost 20 or 30 lacs of rupees, and even to render it available on the modified scale described by the Revenue Board, I do not think or can reckon on a less outlay than one moiety of the first-named sum, viz, 10 lacs of rupees.

I trust it will not be imagined from the preceding remarks that I am wishing or meaning to throw cold water on the project; on the contrary, no one can be more anxious for its completion, or more alive to the advantages and blessings which it is calculated to diffuse

Kistna Annicut.

by its operations than myself, but I feel that it is right not to allow my judgment to be biased by my anxiety to see the project carried out, and therefore I have, after mature and lengthened reflection, candidly stated my opinions, to which I will only add, that laying aside the question of the undoubted benefit that must accrue in due time to the State by a great increase of revenue, I esteem it to be a positive duty which the British Government owe to the inhabitants of the districts which the annicut is meant to fertilize, to adopt a measure which, under God's blessing, will for ever avert the horrors of famine, under which they have before so deplorably suffered.

I have only to further state, that from a careful consideration of all that is recorded in the papers before me, I entertain no doubt of the feasibility of Captain Lake's plan, and that I am likewise satisfied that the point which that officer has selected for the site of the annicut is the proper (or, perhaps, I might say only) one; I accordingly recommend that the whole of the documents and plans which are now circulated be transmitted to the Honourable Court, with the earnest recommendation of this Government in favour of the project, but at the same time accompanied by an intimation, that should it even be fully approved and sanctioned, no steps will be taken for commencing on the work until the Godavery Annicut shall not only have been completed, but shall have stood the test of at least one season of floods and inundations.

18 June 1849.

(signed) *Henry Pottinger.*MINUTE of the Honourable *D. Elliott.*REPORT of Committee upon Captain *Lake's* project of an Annicut across the Kistna.General feasibility  
of the project.

I THINK the committee have satisfactorily demonstrated "the general feasibility of the project," that is to say, that the construction of an annicut across the Kistna is quite practicable, and that it will provide certain means of irrigation to very extensive tracts on both sides of the river, in the districts of Masulipatam and Guntoor.

Site.

I think also that they have shown good grounds for preferring "the site" proposed by Captain Lake, viz., Bezwarah; the choice appears to lie between Bezwarah and Joopody, a place 11 or 12 miles higher up the river. The chief disadvantage that occurs at Bezwarah is the narrowness of the channel, and the consequent depth and force of the stream, the velocity of which is increased by this cause from three to five miles the hour. This presents considerable difficulties, but the committee are of opinion that they may be obviated, and pronounce confidently, that with due care, the work may be constructed safely, notwithstanding the impediments adverted to. It is to be observed, that while the narrowness of the river at Bezwarah is a disadvantage in one view, it is an advantage in another, for the length of an annicut on this site will be about the half of one at Joopody, or any other favourable site, and the facility of construction, the committee observe, is great in inverse proportion to the length; in other respects the advantages to be found at Bezwarah are very important, not only with a view to the construction of the annicut itself, but with reference to the works necessary to give it effect. I advert particularly to the facility of obtaining the requisite materials for building the annicut, and to the great saving of expense which will arise from the heads of the great channels for irrigating the country on both sides of the river being placed at Bezwarah, instead of 12 miles higher up, a saving not only in the original cost of forming the channels but in the annual charge for keeping them in repair.

Committee's  
Report, p. 36.  
Report, p. 21.  
Appendix (C.)  
Specification.

An independent advantage to be gained by fixing the site at Bezwarah is, that being on the line of the great northern road, it is "convenient for the purposes of communication, whether by the annicut or by a bridge over the work." Captain Lake strongly recommended a bridge, and the plan provides for piers upon which a bridge may eventually be erected at a comparatively small cost; but without a bridge, the annicut, during a good part of the year, would afford a passage, and save a great deal of obstruction which those who use the road now meet with at this point.

Plan, p. 37.

P. 24.

The committee have followed generally the design of Captain Lake, with modifications adapted to the varying section of the river, and with the important alteration of an addition of four feet to the height of the annicut, raising it from 12 to 16 feet. The height proposed by Captain Lake would be sufficient, the committee think, to give a command of water for all the land included in the revenue statements which they submit (to show the expected increase of cultivation and revenue), and "probably far more," but not for the whole tract delineated in Captain Lake's map, for the supply of which, they are of opinion, it ought to be made sufficient. It is to render it effective to this extent that the additional height is recommended.

With proper preparation the committee think that the annicut might be built in the first year to the height (above the summer water) of five feet throughout, and the under sluices to a height sufficient to serve in the second year as drains during the progress of the rest of the construction. The full height of the annicut would not be attained till the third year, nor, perhaps, even then, should circumstances render it desirable to maintain a lower height for any period; "such arrangements, however," they observe, "cannot be predetermined, and must be left to the judgment of the executive officer." I take it, that at any rate the annicut could be built up within the third year to the height proposed by Captain Lake (three-fourths of that proposed by the committee), so as to give a command of water in the fourth year sufficient for the irrigation of all the land expected to be prepared for wet cultivation as soon as the means are provided.

In

In reviving the plan, the committee "have been guided by the highly important experience obtained in the construction of the Godavery Anicut," which has also afforded them the most valuable assistance in preparing their estimate of the cost of the work, which very greatly exceeds that of Captain Lake. The excess is owing partly to the alterations in the plan, giving increased length to the river section proposed for the site of the anicut, and increased height (one-third) to the anicut, as above-mentioned, but chiefly to the provision of what is called a plant, which the experience of the Godavery works has shown to be necessary, the charge for this alone being estimated at 1,11,407 rupees, whereas Captain Lake's estimate allowed only 20,000 rupees, under the head of "Sundries," to meet all expenses of the kind. Again, the revised estimate allows 70,000 rupees, instead of 36,693 rupees, for contingencies; and 68,550 rupees, instead of 20,000 rupees, for superintendence, providing for the employment of a civil engineer, with two first and two second assistants, for three years, "though it is not certain that so many extra officers will be required." Further, the revised estimate adds from 50 to near 100 per cent. to the prices assumed by Captain Lake.

Estimate, p. 40.

Estimate of Committee	-	-	7,49,165
Captain Lake	-	-	4,08,639
Excess	-	-	Rs. 3,46,526

Appendix (C.)  
to Committee's  
Report.

See Detail in Ap-  
pendix to Estimate.

Report, para. 45, pay of Civil Engineer and Four Assistants for Three Years	-	-	49,950
Subordinate Superintendence	-	-	1,600

Rs. 68,550

Of the plant, which forms so large an item in the new estimate, being more than one-seventh of the whole amount, the committee believe that "no inconsiderable portion may be provided from that of the Godavery Anicut;" but they make no allowance on this account.

On the whole, it seems to me that the committee have formed an estimate which well entitles to the credit they claim of "having done all in their power to prevent disappointment in the cost of the work," although "they cannot undertake to certify the correctness of calculations so liable to be disturbed by contingencies."

Their estimate, however, applies only to the anicut, and the sluices, locks, &c., immediately connected therewith, without the "Detail Irrigation Works," which Captain Lake estimated roughly at six lacs; and besides the items of embankments, roads, bridges, &c., amounting to seven lacs more. It is very likely that the estimate for "Detail Irrigation Works" is under the mark, and I would give a margin of at least a lac to meet deficiencies. The last estimate of seven lacs includes 3,00,000 rupees for road, 1,00,000 rupees for the proposed bridge over the anicut, 1,00,000 rupees for an aqueduct to Deevy pergunnah, &c., and 2,00,000 rupees for embankments. Possibly a part of the last item may be connected with the "Detail Irrigation," but all the rest may be dismissed from consideration at present. Supposing that half of the sum allowed for embankments, or one lac may belong to the works for carrying on the detail irrigation, and adding it to the six lacs under that head, with one lac more for deficiencies in the estimate, the amount will be 8,00,000 rupees, which, with the estimated cost of the anicut, will make a grand total of 15,49,165 rupees.\*

3,00,000
1,00,000
1,00,000
Rs 5,00,000

Note.—300 miles of road at 1,000 rupees per mile. This appears a small allowance, but Captain Lake explains (p. 31.) that "as all the heavy traffic will be by means of the channels, he has only provided for such roads as will be required for foot passengers, light conveyances, cattle, &c."

* Detail Irrigation Works as above	-	6,00,000
Deficiencies in estimate	-	1,00,000
Embankments	-	1,00,000

8,00,000

Anicut, &c. - - - 7,49,165

Grand Total - - - Rs. 15,49,165

1st Year, including plant	-	-	3½
2d " "	-	-	2
3d " "	-	-	2

Lacs 7½

	Anicut.	Detail Irrigation.
† 1st Year	- 3½	-
2d "	- 2	- 2
3d "	- 2	- 2
4th "	-	- 1
5th "	-	- 1
6th "	-	- 1
7th "	-	- 1

Returns.

8

A. and B.

7½

Lacs 15½

The cost of the anicut will be distributed over three years, probably in something like the proportions stated in the margin. The committee observe, with regard to the estimate for detail irrigation, that the amount "will be very gradually expended." This expenditure, of course, will not commence till the anicut is well advanced, probably not till the beginning of the second year. In that and the following year, perhaps, four lacs may be expended, leaving the remaining four to be employed gradually as the demand for extended irrigation arises, say at the rate of one lac per annum. In this way the whole amount of 15½ lacs will be distributed over seven years, the amount expended in any one year probably not exceeding four lacs.†

I come now to the consideration of "the returns." The committee have carefully revised and checked the statements formerly furnished, and submit the results in fresh statements appended to their report, which they think correctly exhibit "the profits that may reasonably be expected from an anicut within the limits of any sites or heights that have been or are likely to be suggested," *à fortiori* from an anicut with the command which they propose to give to that recommended by them, by the addition of four feet above the height intended by Captain Lake.

According to these statements, the increase of revenue which may be expected in the Masulipatam district in the first year after the anicut becomes effective, from the more perfect irrigation and greater productiveness of rice lands now cultivated, from the cultivation of rice lands now left waste from want of water, and from the extension of irrigation to lands now dry, which will thereafter bear rice crops, is 1,41,782 rupees; which will be gradually



Kistna Annicut. gradually augmented, till, in the fourth year, it amounts to 2,67,882 rupees. This is the increase expected from lands held by ryots directly from Government, besides what may be obtained from zemindars for the improvement of the lands included in their estates, and from enamdars for the same.

The estimate for Guntoor gives 3,28,718 rupees as the increase to be expected from lands at present cultivated by irrigation, at the standard of the best yield, without additional assessment; from waste lands brought under wet cultivation, and from lands now under cultivation made capable of bearing rice crops, with additional assessment, at the survey rates, upon the land at present cultivated, the amount would be raised to 4,01,618 rupees.

A further sum of 62,559 rupees is added as possible, but doubtful; making a total of 3,91,377 rupees, without enhancement of assessment; or 4,64,177 rupees, with enhancement.

Masulipatam	-	-	-	-	2,67,882
Guntoor	-	-	-	-	4,64,177

Rs. 7,32,059

From Ruttepaud, Rs. 62,559.

Guntoor minimum	-	-	-	-	3,28,718
-----------------	---	---	---	---	----------

Profit expected in 1st year in Masulipatam	-	-	-	-	1,41,782
--	---	---	---	---	----------

Rs. 4,70,500

The maximum expectation from the two districts, when the annicut and the auxiliary works have been brought into full operation, is 7,32,059 rupees. The minimum expected from Guntoor, excluding the item considered doubtful, and making no allowance for additional assessment, together with the estimate of profit in the first year only from Masulipatam, 1,41,782 rupees, without any allowance in either district for payments from zemindaries and enams, for water drawn for their irrigation from channels supplied by means of the annicut, amounts to 4,70,500 rupees. The maximum expectation, as above, if it were realized, would give a return of 48 per cent. upon the capital expended; assuming it at 15½ lacs, the maximum would give 30 per cent. Having carefully

considered the grounds of the committee's estimates, I feel assured that, within the time during which the expenditure will be probably going on, a permanent increase of revenue will be gained from extended and improved cultivation, which will not be short of 30 per cent. upon the cost, at the least, and will probably much exceed it, supposing the command of the annicut to be extended by increasing its height now designed.

Thus it appears that the projected work promises to be a highly profitable one by creating additional revenue; still more probably by saving the public finances from a recurrence of the enormous losses of revenue caused by the dearths which have afflicted the districts of Masulipatam and Guntoor. But, independently of this consideration, I heartily concur in the sentiments expressed by the Right honourable the President, that it is "a positive duty which the British Government owe to the inhabitants of the districts which the annicut is meant to fertilize, to adopt a measure which, under God's blessing, will for ever avert the horrors of famine under which they have before so deplorably suffered."

Para. 50.

The committee observe, that they have confined their estimate of returns to those immediately or early expected from the known resources of the districts, and the disposition of the ryots; they remark, however, that "the annicut as proposed by them will command in Guntoor about half a million of acres, and the same in Masulipatam, of Government and other lands, exclusive of Deevy, a zemindary under the Court of Wards; and that the supply of water from this tract will be most abundant during the season of cultivation of paddy, and very considerable even in the lowest state of the river; so that there is every reason to believe that the whole will eventually be cultivated." This expectation, however, depends upon other conditions besides a sufficient supply of water, viz. a sufficient supply of labour and capital, which can scarcely be forthcoming within many years, and a ready market for the increased produce, with remunerating prices. On the head of prices, it is obvious to remark, that the abundance which the work under consideration is calculated to produce will tend to make rice cheaper; and if there could be found means at once for the cultivation of the whole of the tracts indicated in the remarks of the committee just quoted, extending to a million of acres, the immediate result would be a glut in the market, and a loss to the cultivators by their crops being unsaleable.

4 July 1849.

(signed) D. Elliott.

Revenue Department, 8 January (No. 1) 1851.

Our Governor in Council at Fort St. George.

Kistna Annicut: Letter dated 20 Nov. (No. 83) 1848, paras. 15 & 16; Letter dated 20 July (No. 37) 1849; Letter from the Government of India, dated 18 August (No. 10) 1849.

Para. 1. The letters and paragraphs referred to in the margin, relate to a plan for the construction of an annicut across the River Kistnah, for the purpose of irrigating portions of the Guntoor and Masulipatam districts, which you have submitted for our sanction.

2. This project has been at various times under the consideration of Government since the year 1792, and although circumstances have hitherto prevented its being carried into effect, its feasibility and the great advantages which it would confer on the before-mentioned districts, seem never to have been doubted. One of the principal considerations which deterred the Government from carrying

carrying the plan into execution, was probably that both Guntoor and Masulipatam had been permanently settled, and there would have been difficulty in arranging with the zemindars for the reimbursement of the necessarily large outlay. That obstacle is, however, now removed, the whole of Guntoor and a considerable part of Masulipatam having reverted to the possession of Government.

Kistna Annicut.

3. The present scheme is founded on a report by Captain Lake, the civil engineer of the division, dated the 3d July 1847. It had been examined and approved by Major A. Cotton, whose experience in such works in Tanjore is very extensive, and who was at the time engaged in superintending the construction of the annicut across the Godavery River.

4. The plans and estimates were submitted to your Government by the Board of Revenue in the Department of Public Works, with a strong expression of opinion in favour of the undertaking. Considering, however, that so important a work should not be commenced without the most rigid scrutiny, you appointed Major A. Cotton, Captain Buckle, Captain Bell and the Collectors of Masulipatam and Guntoor, a committee for that purpose, directing them to assemble at the site of the proposed annicut, and there to examine carefully the plans and estimates both of expenditure and return, and report fully their opinion of them, of the feasibility of the project generally, and of the eligibility of the proposed site, or the advantages over it of any other they might consider preferable.

5. The report of the committee is dated the 26th January 1849, and was submitted to you on the 30th April 1849. After having made a most careful examination into the whole question, the committee close their report with the following paragraphs:

"53. In conclusion, the committee desire to record their conviction of the very great importance of the proposed work, and of its early sanction. That it would, in all human probability, avert the possibility of a destructive famine in this region, seems an argument of the greatest possible weight, independent of profitable expectations, which are themselves most promising; again, its early sanction is important to meet the expectations of the ryots and the contingency of drought, and to hasten the profitable returns, in addition to which, the sooner the valuable experience acquired at the Godavery is brought to bear upon the Kistnah project, the more effective it will be.

"54. The loss of revenue by the famine of 1832-33 is estimated at least at one crore; the loss of property at a far greater amount; of life at 2,00,000 or 3,00,000, and of cattle at 2,00,000 (at the lowest) in Guntoor alone, besides the ruin of 70,000 houses. These facts will, the committee believe, bespeak more effectively than the most laboured arguments, the favourable attention of the Honourable Court of Directors to the project now submitted, as one of indispensable and urgent necessity. The famine of the Northern Circars in 1833, and that of the North West Provinces of India at a later period, prove with irresistible force that irrigation in this country is properly a question, not of profit, but of existence.

"The amount of the revised estimate is Rs. 7,49,165. 4. 2."

6. The question has again been carefully considered by your Government, and you have satisfied yourselves, that adding to the estimate of 7½ lacs given by the committee for the annicut alone, the sum of 8 lacs as the probable amount required for "detail irrigation works and embankments," the total cost of the work when complete will not exceed 15½ lacs. The committee estimate "the advantages of the work from the two districts" (by which terms, however, they mean the increase of revenue to be gained by the Government, alone, without including the benefits to be derived by the ryots), when the annicut and auxiliary works shall have been brought into full operation, at 7,32,059 rupees per annum, or 48 per cent. on the capital expended according to the above estimate. Without going the full length of the committee's expectations, you state that you feel assured that "a permanent increase of revenue will be gained from extended and improved cultivation, which will not be short of 30 per cent. at the least."

7. "The projected work," you observe, "thus promises on the lowest estimate to be a highly profitable one, by creating additional revenue, and it will be still more so probably, by saving the public finances, and the inhabitants from a recurrence of the enormous losses caused by the dearths which have afflicted the districts of Masulipatam and Guntoor."

8. You accordingly resolved to transmit all the papers to the Government of India with your earnest recommendation in favour of the project. That authority,

Kistna Annicut.

in addressing us on the subject, state that the contemplated work has their entire approval, and submit their strong recommendation that the plan proposed by the committee should meet with our favourable consideration.

9. The project has thus been submitted to the examination of those whose scientific acquirements, general experience and local knowledge render them the most competent to form an opinion as to its merits, and has received the strongest recommendation from those authorities under whose consideration it has passed. We have carefully examined the papers submitted to us, and have satisfied ourselves that every possible means have been adopted to obtain the fullest assurance of the practicability of the proposed undertaking, and that the greatest care has been taken to prevent future disappointment in respect to the estimates, both of cost and returns. Under these circumstances, and concurring fully in the observation of Sir Henry Pottinger, that independently of the undoubted benefit which must in due time accrue to the State by a great increase of revenue, it is "a positive duty which the British Government owes to the inhabitants of the districts which the annicut is meant to fertilize, to adopt a measure which, under God's blessing, will for ever avert the horrors of famine under which they have before so deplorably suffered," we readily give our cordial sanction to the undertaking, and trust that matters will be so arranged that the establishment employed on the Godavery Annicut may not be broken up and dispersed, but be made fully available for the works on the Kistna.

London, 8 January 1851.

We are, &c.  
(signed) *John Shepherd,*  
*J. W. Hogg,*  
&c. &c.

Annicut across the Pennar.

Annicut, serving as a Bridge across the Pennar.

Revenue Department (No. 497.)

From Sir *H. C. Montgomery*, Bart., Chief Secretary to the Government of Fort St. George, to *J. Dorin*, Esq., Secretary to the Government of India.

Sir,

Letter from the Board of Revenue, Department of Public Works, No. 97, dated 4 February 1850, with correspondence, plans and estimate; Letter dated 7 April 1851, No. 337, with correspondence; Extract Minutes Cons., 27 May 1851, No. 496.

I AM directed by the Right honourable the Governor in Council to request you will bring under the consideration of the Government of India, the accompanying correspondence, with plans and estimate relating to a project for building an annicut across the Pennar

River, in the Nellore district, the cost of which is estimated at Rs. 85,547. 4. 6.

2. The Governor in Council requests attention to the views recorded upon the subject by this Government, in an extract from the Minutes of Consultation of this day's date, and to solicit, with reference thereto, the sanction of the Government of India to the proposed outlay.

Fort St. George,  
27 May 1851.

I have, &c.  
(signed) *H. C. Montgomery,*  
Chief Secretary.

No. 1,207.

EXTRACT from the Proceedings of the Honourable the President of the Council of India in Council in the Financial Department, under date 18 July 1851.

READ a despatch from the Government of Fort St. George, No. 497, dated 27th May last, with enclosures soliciting sanction to an outlay of Rs. 85,547. 4. 6, for the construction of an annicut across the Pennar River, in the Nellore district; the work being intended to secure and extend the cultivation of a large tract of country, besides answering the purpose of a bridge.

## RESOLUTION.

Annicut across the  
Pennaar.

The President in Council is satisfied that this work must be attended with considerable advantage to the public revenue, on the assumption that the calculations respecting it are grounded on accurate data, but the outlay of Rs.85,547. 4. 6. exceeds the limit to which the authority of this Government to sanction expenditure has been restricted by the Honourable the Court of Directors, and he therefore resolves that the project shall be recommended to the favourable consideration of the Honourable Court.

## ORDER.

Ordered, that the despatch from the Government of Fort St. George and its original enclosures, together with a copy of the foregoing Resolution, be forwarded to the Home Department, with a view to the proposition being submitted for the consideration and orders of the Honourable the Court of Directors; that department apprising the Government of Madras of the course that has been adopted.

Ordered also, that copies of the original papers be kept for record in this office.

(A true extract.)

(signed) J. Dorin,  
Secretary to Government of India.

Revenue Department, 18 February (No. 2) 1852.

Our Governor in Council at Fort St. George.

Para. 1. In a letter, dated the 12th August last (No. 10), the Government of India have submitted for our favourable consideration, a project laid before them by your Government for the construction of an annicut (to serve likewise as a bridge) across the Pennair River in the Nellore district, at a cost of Rs. 85,547. 4. 6.

2. This work is intended to secure and extend the cultivation of a large tract of country. It is stated that on the average of the last five years land bearing an assessment of 13,094 rupees has been annually abandoned, solely from the want of water to irrigate it. This amount would be at once secured by the execution of the proposed work; but it is further confidently anticipated that by increased cultivation, the ultimate gain to the revenue would not fall short of 20,000 rupees.

3. Relying on the correctness of your estimates, both of expenditure and of return, we accord the sanction solicited by you and by the Government of India. Although in authorizing expenditure on works of this description, we of course look to the direct return which they are calculated to produce in the shape of an increase to the land revenue, we are also mainly influenced by a consideration of the great advantages which they afford to the cultivators, by extending the field of their labour, securing to them its fruits, and adding to its productiveness.

We are &c.  
(signed) J. Shepherd,  
J. W. Hogg,  
&c. &c.

London, 18 February 1852.

Cheyaur Annicut; in North Arcot.

Cheyaur Annicut.

Revenue Letter from Fort St. George, dated 25 June (No. 30) 1851.

Para. 1. We have the honour to submit for your information copies of the papers recorded in the Consultations noted in the margin, relating to a project laid before us by the Board of Revenue for constructing an annicut across the Cheyaur River, and in the excavation of a channel to supply water from it to several tanks in certain talooks of the district of North Arcot.

Diary, 10 Dec.  
1850, Nos. 7 to 12;  
Cons. 8 April 1851,  
Nos. 38, 39; Cons.  
13 June 1851.

Cheyaur Annicut.

2. The cost of the work is estimated at Rs. 31,475. 15. 11., and the object in view is to ensure a regular and certain supply of irrigation, and thereby secure the cultivation of a particular tract of land, means by which both the ryots and the Government revenues will be benefited. It is calculated by the Collector that the returns from augmented cultivation will be highly remunerative, yielding eventually 33 per cent. on the outlay, and immediately, or almost immediately, by means ready to be put in action, the effect of which can be estimated with great certainty, 18 per cent.

3. We request your particular attention to the minutes recorded by the members of Government, and to our correspondence with the Government of India, regarding the proposed works. Your Honourable Court will observe that the Government of India have postponed the consideration of the project referred to them, but that we have again addressed them on the subject, and in now reporting our proceedings, we have only to express our hope that your Honourable Court will approve of our pressing works of such importance for the improvement of the country, and which will certainly repay their cost within a few years, and leave a permanent increase of revenue.

---

No. 1,150.

From Sir *H. C. Montgomery*, Bart., Chief Secretary to Government, to  
*F. J. Halliday*, Esq., Secretary to the Government of India.

Sir,

I AM directed by the Right honourable the Governor in Council to forward, for submission to the Government of India, an extract from the Minutes of Consultation of this day's date, together with the correspondence to which it has reference, and to request that early sanction may be obtained for the proposed expenditure of Rs. 31,475. 15. 11. in the construction of an annicut across the Cheyaur River, and the excavation of a channel to supply water from it to several tanks in the district of North Arcot, a project which it will be observed is highly approved of by this Government.

I have &c.

(signed) *H. C. Montgomery*,  
Chief Secretary.

Fort St. George, 7 December 1850.

---

No. 367.

No. 33.

EXTRACT from the Proceedings of the Honourable the President of the Council of India in Council in the Financial Department, under date 14 March 1851.

READ a communication from the Home Department, No. 512, dated the 20th December last, forwarding for consideration and orders a despatch from the Government of Fort St. George, No. 1,150, dated the 7th idem, with enclosures, soliciting sanction to the expenditure of Rs. 31,475. 15. 11. for the construction of an annicut or dam across the Cheyaur River, and for the excavation of a channel to supply water from it to certain tanks in the Trivatoor and Wandiwash talooks of the district of North Arcot.

RESOLUTION.

The President in Council is of opinion that in the present position of the Indian finances, the consideration of the question of constructing works on the Cheyaur River had better be postponed.

ORDER.

Ordered, that a copy of the foregoing resolution be forwarded to the Home Department, for communication to the Government of Fort St. George, and that the original papers be returned, copies being kept for record in this office.

(A true extract.)

(signed) *J. Dorin*,  
Secretary to the Government of India.

---

No. 567.

From Sir *H. C. Montgomery*, Bart., Chief Secretary to Government,  
to *J. Dorin*, Esq., Secretary to the Government of India.

Sir,

Para. 1. I AM directed by the Right honourable the Governor in Council to acknowledge the receipt of an extract from the proceedings of the Government of India in the Financial Department, dated 14th March 1851, declining, in consideration of the present position of the Indian finances, to comply with the application of this Government, for permission to expend a sum of Rs. 31,475. 15. 11. in the construction of an annicut across the Cheyaur River, and in the excavation of a channel to supply water from it to certain tanks.

2. The object which this Government had in view in proposing these works, was, as explained in extract Minutes of Consultation, 7th December 1850, No. 1,149, to ensure a regular and certain supply of irrigation, and thereby secure the cultivation of a particular tract of land, means by which both the ryots and the Government revenues would be benefited. All the officers who were consulted respecting the project were extremely favourable to its execution, and the chief engineer was of opinion that it was one of that character which was required to be carried out in every available situation all over the country, as the best and only means of promoting its prosperity. The project, too, had been very carefully examined and drawn out by the local engineer officers; and it had been shown by a detailed investigation into the revenue accounts by the Collector, that the returns from augmented cultivation would be highly remunerative, yielding eventually it was computed 33 per cent. on the outlay, and immediately, or almost immediately, by means ready to be put in action, the effect of which can be estimated with great certainty, about 18 per cent.

3. The Government of India will observe, that there was nothing novel or intricate in the nature of the works; they were of that simple character, which experience in other localities has proved to be followed by success, and they were projected for a part of the country which, from various circumstances, has not received that attention to the works of irrigation which is ordinarily bestowed on other districts. They were, moreover, proposed not solely with the view of obtaining an augmentation of the revenue, which was, however, certain, but had also for their object the maintenance of existing resources.

4. With the firm impression of the economy of the expenditure, the Governor in Council was induced to place the project before the Government of India with his favourable recommendation, and it has been with considerable disappointment that he has heard the decision of the Government of India regarding it. In soliciting a reconsideration of the subject, the Governor in Council would point out that it is by improvement of the means of irrigation, especially by works such as that now under consideration, that the revenues of this Presidency and the condition of its inhabitants are to be advanced, and he trusts these advantages will not be retarded or impeded by the continued refusal of the Supreme Government to sanction an outlay which promises such favourable results, and which will afford a certain and early return in increased revenue.

5. I am desired to take this opportunity of forwarding, for the particular notice of the Government of India, copy of a report recently furnished by the Board of Revenue\* for the information of the Honourable Court of Directors, and in course of transmission by the ensuing mail, showing the results obtained from works of irrigation of a special nature executed in the provinces of the Madras Presidency, which it is hoped will satisfy his Honour in Council that the expenditure under this head, under the orders of this Government, has generally been judiciously incurred, and followed by a fair measure of success.

(signed) *H. C. Montgomery*,  
Chief Secretary.

Fort St. George, 13 June 1851.

\* From the Board of Revenue, Department Public Works, 24 October 1850, No. 1,010, with Report and Abstract Statement.

Cheyar Annicut.

Construction of an  
Annicut across the  
Cheyar River.

Revenue Department, 19 November (No. 9) 1851.

Our Governor in Council, at Fort St. George.

PARA. 1. IN your letter, dated 25th June last (No. 30), you have solicited our sanction to an expenditure of Rs. 31,475. 15. 11, for the construction of an annicut across the Cheyar River, with a channel for the supply of the Mookoor and Poorsy tanks, and of several intermediate ones, in the Triveetoor and Wandewash talooks of the district of North Arcot.

2. The chief engineer (Lieutenant-colonel Lowe) reports that the estimates "have been carefully and minutely drawn up," observing that "the project is precisely of that description which is required to be carried out in every available situation all over the country, as being the one without which the revenues cannot be raised to their maximum, nor the cultivation of the country carried on with certainty."

3. From the report of the Collector of North Arcot, Mr. J. D. Bourdillon, it appears that the immediate increase of revenue which may with certainty be calculated on, amounts to 18 per cent. on the outlay, while an ultimate increase of 33 per cent. may be confidently expected. The extension hereafter of this channel, so as to bring a further line of tanks under its influence, would, he adds, be productive of still greater advantages.

4. The project has been submitted to the Government of India, but the President in Council, without entering on the merits of the case, merely records an opinion that, "in the present position of the Indian finances, the consideration of the question of constructing works on the Cheyar River had better be postponed."

5. Our attention has of late years been much directed to the advantages to be derived from the construction and improvement of public works generally, and of those of irrigation in particular; and, looking not merely to the moderate sum which it is now proposed to expend, and to the large proportionate return expected, but having also especial regard to the great boon which would be afforded to the cultivators, by giving them an unfailing supply of water for their cultivation, instead of the uncertain rains, on which they are now entirely dependent, we sanctioned the proposed expenditure.

6. We desire that the attention of the Board of Revenue may be called to the circumstances mentioned by the Collector, in reference to the system prevailing in that part of his district, under which, he says, "the assessment does not vary, as one or two crops may be cultivated, but is laid on in a single unvarying sum, which is paid whether or not there is water for a second crop. Hence," he observes, "the high class lands are very generally left waste, because the ryots are afraid to touch them, except in an unusual season, knowing that if they plant one crop they will be liable for the assessment of two." This practice may be found to exist in other districts, and should be corrected. It is obvious that if the rate of assessment has been fixed on the assumption that water will be supplied from public sources sufficient for the cultivation of two crops within the year, while in ordinary seasons water sufficient only for one crop is available, the exaction of the full rate at all times must tend greatly to discourage the ryots from undertaking the cultivation of lands so circumstanced, and thus to inflict injury both on Government and the cultivators.

We are, &c.  
(signed) *John Shepherd,*  
*J. W. Hogg,*  
&c. &c.

London, 19 November 1851.

Dam at Chutwye.

Dam at Chutwye.

Revenue Letter from Madras, dated 10 September (No. 53) 1851.

PARA. 1. IN continuation of our letter (No. 16) in this department, dated 19th March 1850, we have the honour to submit for your consideration copies of the papers recorded in the Consultations noted in the margin\* on the proposition of

\* Revenue Diary, 2 July 1850, No. 17 to 21; Revenue Cons. 6 August 1850, Nos. 37 to 41; Revenue Diary, 17 January 1851, Nos. 15 to 17; Public Works Diary, 22 July 1851, Nos. 9, 10; Revenue Diary, 9 September 1851, Nos. 6 to 8.

of Major Cotton, civil engineer of the Seventh Division, to construct a new dam at Chetwye, in the district of Malabar, in lieu of the one which failed at Yennamaikul.

Dam at Chetwye.

2. Your Honourable Court will observe that the chief engineer approves of the change of site, and that the Resident at Cochin, on behalf of that Government, who at first urged objections to it, has now withdrawn them. The sum estimated for the construction of the new dam amounts to Rs. 36,215. 14; and, before recommending this outlay for the sanction of the Government of India, we have considered it advisable to call for certain further information as to the advantages to be derived from the work by this Government, as well as in respect of the portion of expense which the Cochin Government may be willing to bear in its construction, and maintenance afterwards in repair.

3. We hope soon to have the honour of addressing you on the above points, and of receiving your approval of our proceedings.

Revenue Letter from Madras, dated 25 June (No. 30) 1852.

Para. 1. IN continuation of our letter in this department, dated the 10th September 1851, No. 53, we have the honour to transmit, for the consideration of your Honourable Court, a copy of the correspondence recorded in the Consultations noted in the margin,\* regarding the dam proposed to be built at Chetwye, in Malabar, in lieu of the one which failed at Yennamaikul, and to solicit your sanction to the estimate for its construction, amounting to Rs. 36,215. 14.

\* See below.

2. We also request to be favoured with your orders in respect of the portion of outlay which the Cochin Circar should be invited to bear, both on account of the construction as well as the after repairs of the dam, and solicit your attention to the minutes recorded by us on the subject.

No. 580.

THE Government observe, that the several reports and communications respecting the failure of the dam at Yennamaikul, and the construction of a new one in lieu of it at Chetwye, have formed the subject of direct correspondence with the Honourable the Court of Directors; and they resolve in consequence to submit the letters referred to at the head of these proceedings to the Honourable Court, in continuation of the letter addressed to them under date the 10th September 1851, No. 53, and to solicit their sanction to the estimate for the proposed dam at Chetwye, amounting to Rs. 36,215. 14, and their orders in respect of the portion of outlay which the Cochin Circar should be invited to bear, both on account of the construction as well as the after repairs of the dam.

No. 28.

The following minutes recorded by the members of Government are ordered to be brought to the notice of the Honourable Court of Directors, together with the above correspondence.

(signed) *H. C. Montgomery,*  
Chief Secretary.

Fort St. George, 19 June 1852.

MINUTE by the Right Honourable the President.

LETTER to the Honourable Court, requesting sanction to the estimate for building a dam at Chetwye, in lieu of the one formerly destroyed at Yennamakul in Malabar.

No. 28 A.

I HAVE before placed my sentiments on record respecting the Yennamakul dam.

The original old native work had stood, I understand, for ages, when a servant † of the British Government in 1802, and then Assistant Collector of Malabar, incurred some expense in unauthorizedly destroying it for the purpose, as I have heard, of enabling boats to go out of, and come into the Backwater, which the dam separated from the sea.

† Mr. Drummond.

The work was forgotten, and allowed to be in a dilapidated state for many years, but has lately become the subject of much correspondence.

The engineer and civil officers having fixed on Chetwye as a better site for a dam than Yennamakul, considerable sums have been already sanctioned, but the work has failed, and an application is now about to be made to the Honourable Court for leave to expend Rs. 36,215. 14. on it.

The civil engineer † of the Seventh Division having once before recommended that the Cochin Government should be called on to bear a share of the expense of building the new dam

† Major Cotton.

\* Cons. 11 November 1851, Nos. 39, 40; Cons. 24 February 1851, Nos. 5, 6; from Board of Revenue, 13 May 1852, No. 331, in Cons. 22 June 1852, Nos. 27, 28, 28 A. and 28 B.



Dam at Chetwye.

dam at Chetwye, I then assigned my reasons for not concurring in that recommendation, and I must here repeat, that they are not only unchanged but strengthened: Indeed, I do not comprehend the grounds on which the Board of Revenue, Department of Public Works, in their letter of the 13th of last month, after having had the Board's letter of the 23d January 1852 before them, talk of the "expected contribution" from the Cochin Sirkar; and add, that "they concur with the civil engineer, that it is reasonable that the Cochin Sirkar should be invited," &c.

The Resident has already, in a former letter, intimated the readiness of the Cochin Durbar to contribute to the preservation of the dam so soon as it shall be built, and this is as much as I conceive ought to be required.

Under these views, I hope the Honourable Court to whom this minute is to be transmitted, will authorize the dam to be erected at the sole expense of the British Government.

12 June 1852.

(signed) *Henry Pottinger.*

No. 23 B.

MINUTE by the Honourable Mr. *Thomas.*

LETTER to the Honourable Court on the Chetwye Dam.

\* Dated 15 Jan. 1852; Extract Minutes of Cons. 23 January 1852; Revenue Department.

It is not clear to me, from the Resident's letter,\* that the Cochin Sirkar will object, if not demanded "as a matter of duty" (para. 5 Resident's letter), to bear a fair share of the outlay in the construction of this dam, if the revenues of that Sirkar are increased thereby.

Should the Honourable Court in deference to the views of the Resident, as to the "very limited finances of this Sirkar," in which I do not concur, as it has large surplus funds in Company's paper, be willing to act with peculiar liberality to that State, and bear the whole charge, I can see no objection. But neither do I see any reason for not claiming or inviting that Government to bear a fair and moderate portion of the charge in proportion to the benefit, or the increasing revenues recovered by the Cochin Sirkar, as the direct consequence of the construction of the dam.

14 June 1852.

(signed) *J. F. Thomas.*

Revenue Department, 15 December (No. 19) 1852.

Our Governor in Council at Fort St. George.

Letters dated 10 Sept. (No. 53) 1851; 25 June (No. 30) 1852.

Para. 1. WE now reply to your letters of the dates noted in the margin, forwarding, for our sanction and orders, a proposal of Major Cotton to construct a dam at Chetwye, in lieu of that which failed at Yennamaikul, in the district of Malabar.

2. Chetwye is some miles further down the stream than Yennamaikul, and before finally determining on the new site, the question appears to have received a very careful investigation, and no effort seems to have been spared to arrive at an accurate view of the comparative advantages of the former and proposed position of the dam. The discussion which preceded the decision of the question being of an exclusively professional character, it is not our intention to enter into a review of it. It is sufficient to observe in this place, that Major Cotton appears not only to have effectually disposed of the objections which were urged against the work, so far as to carry the opinion of his official superiors with him, but to have obtained the acquiescence of his opponents in the correctness of his views.

3. We observe, also, that the opposition originally offered by the Cochin Sirkar to the removal of the bund from Yennamaikul to Chetwye was based on an erroneous view of the subject, and was subsequently withdrawn.

4. In a financial point of view, the proposal of Major Cotton appears to possess many great advantages. The expense of restoring the dam at Yennamaikul is estimated at Rs. 34,814. 13, and that of constructing a new dam at that place at Rs. 74,214. 4, while the total expense of a dam at Chetwye is estimated at Rs. 36,215. 14. The revenue derived from the bund at Yennamaikul is 2,500 rupees per annum, and the annual revenue to be expected from the erection of the bund at Chetwye is, at the lowest estimate, 7,500 rupees. If, therefore, the cost of erecting a bund and the return to be expected from it at these two positions be compared, it appears, on a rough computation, that the work might be executed at Chetwye at half the cost, while the return would be trebled, showing a return

a return of  $3\frac{1}{4}$  per cent.\* on the outlay in one case, and of 21 per cent. in the other. Dam at Chutwye

5. Relying, therefore, on the accuracy of the information and estimates submitted to us, we have no hesitation in according our sanction to Major Cotton's proposal.

6. You solicit our orders on another question in connexion with this work, viz. the portion of expense that the Cochin Government should bear in its construction, and subsequent maintenance in repair. As the Cochin State will participate in the benefits accruing from the work, it seems but reasonable that that State should contribute towards the expense of constructing it. But the Dewan of Cochin and the Resident, Major-general Cullen, object to such contribution, the former on general grounds, and the latter on the ground that the Cochin Government was in no way responsible for the failure of the bund, and is, in consequence of its poverty, entitled to liberal consideration. The force of these objections is recognized by your President, while Mr. Thomas does not wholly concur in them.

7. Under all the circumstances of the case, we are disposed to concur in the opinion expressed by your President, in his minute dated 12th June 1852, that the Cochin Durbar having intimated its readiness "to contribute to the preservation of the dam so soon as it shall be built," "this is as much as ought to be required."

We are, &c.  
(signed) *J. W. Hogg,*  
*R. Ellice,*  
&c. &c.

London, 15 December 1852.

Palar Annicut.

Palar Annicut.

Revenue Letter from Madras, dated 22 September (No. 61) 1853.

1. We have the honour to submit, for the information of your Honourable Court, and for your eventual sanction, copy of a correspondence † forwarded by us to the Government of India, having reference to the project of an annicut across the Palar River, near Arcot, to ensure the supply of water to the tanks on both sides of the river in the districts of North Arcot and Chingleput.

2. We beg to draw your attention to the minutes recorded on the subject by the members of Government, and to our final resolutions, founded on them. Your Honourable Court will observe, that the project is one from which substantial benefit to the country within its scope is anticipated, as well as a large and steady augmentation of the revenue, which will no longer be subjected to fluctuations from the vicissitudes of the season.

3. The total cost of the annicut and subsidiary works, and making allowance for various other extra works which may be found necessary in the progress of the operations, as well as for the complete restoration of the Myandravady tank, an important branch connected with them, is estimated at 8,66,114 rupees, and we have solicited the Government of India to refer the entire project for your early decision, and obtain your sanction for the above expenditure.

Cost.	Return.	Return.		
		Decimal.	R.	a. p.
Rs. 74,000	2,500	3.24	07	3 3 11
36,000	7,500	20.83	or	20 13 4

† From Board of Revenue, 12 May 1853, with two letters and four enclosures; Chief Engineer's Report; from Board of Revenue, 16 May 1853; Minute by the Right Honourable the President; Minute by the Honourable Mr. Elliott; Minute by the Honourable Mr. Thomas; Minute by the Right Honourable the President; Memorandum by the Honourable Mr. Elliott; Extract Minutes of Cons. 13 September 1853, No. 1,046; to Government of India, 13 September 1853, No. 1,047.

Note.—The estimates, statements and plans are not sent, as these have been furnished complete, with the correspondence, to the Government of India.

Palar Annicut.

No: 1,047.

From Sir *H. C. Montgomery*, Bart., Chief Secretary to the Government of Fort St. George, to *G. Plowden*, Esq., Secretary to the Government of India.

Sir,

No. 54.

• See below.

1. I AM directed by the Right honourable the Governor in Council to forward, for submission to the Government of India, copies of letters from the Board of Revenue, dated 12th and 16th May last, together with the correspondence, estimates, statements and surveys received with them, as noted in the margin,\* having reference to the project of an annicut across the Palar River, near Arcot, to ensure the supply of water to the tanks on both sides of the river, in the districts of North Arcot and Chingleput.

2. I am also desired to forward the minutes of the Right honourable the President, the Honourable Mr. Elliott and the Honourable Mr. Thomas, and the resolutions of Government founded on them, recorded in an extract Minutes Consultation of this day's date, which afford full information of the nature of the project, and to which the attention of the Government of India is solicited. From the review taken of the subject, the Government of India will observe, that the project is one from which substantial benefit to the country within its scope is anticipated, as well as a large and steady augmentation of the revenue, which will no longer be subjected to fluctuations from the vicissitudes of season.

3. The estimated outlay, as revised by the Board of Revenue, amounts to 5,95,968 rupees; but the chief engineer suggests, in consideration of the almost universal insufficiency of estimates, and the probability, in a work of this nature, that various extra works will need to be executed with it, that two lacs be added, under the head of contingencies; this addition will increase the probable outlay to 7,95,968 rupees. But to this is to be added a further expenditure of 70,145 rupees for the complete restoration of the Myandravady tank, and which will make the aggregate expected expenditure under all heads 8,66,114 rupees.

4. Upon a consideration of the advantages likely to result from the execution of the project, the Governor in Council begs to support it with his strong recommendation, and to solicit that the same may be referred for the early decision of the Honourable Court of Directors, and their sanction obtained to the necessary outlay, amounting, according to the revised estimates of the Board of Revenue, to 5,95,968 rupees, as well as to the disbursement, at the discretion of this Government, of a sum not exceeding two lacs for necessary supplemental estimates, besides what may be needed for the restoration of the Myandravady tank, the entire expenditure under all heads, not exceeding 8,66,114 rupees.

I am desired to state, that a copy of these proceedings will be submitted for the information of the Honourable Court of Directors by the ensuing mail.

(signed) *H. C. Montgomery*,  
Chief Secretary.

Fort St. George, 13 September 1853.

MINUTE by the Right Honourable the President.

No. 48.

LETTER from the Secretary to the Board of Revenue, Department Public Works, No. 632, dated the 12th of May 1853, with various enclosures and plans, submitting a project for an annicut across the Palaur River, near Arcot, at an expense of Rs. 7,95,968. 13.

I HAVE read with great attention and interest the above letter, and the correspondence with it, and have also minutely examined the map and plans to which they refer.

I consider the project of an annicut across the Palaur River at Arcot to be a very admirable one, and one of which the benefits can scarcely be overrated.

It is impossible that I can follow the civil engineer of the Fourth Division through his calculations, plans and estimates, nor does it appear at all necessary that I should attempt anything of the sort, but I may say that they appear to me to have been prepared with the greatest care and skill, such as to entitle them to perfect confidence.

The eventual out-turn of this desirable project is shown to be likely to far more than repay the outlay as soon as the ryots shall have the means, and shall have acquired confidence, to avail themselves of the vast facilities which it will afford them, to extend and improve their cultivation.

This

\* Two Letters from Board of Revenue, giving cover to one estimate with detail, five statements, eight plans, two letters with four enclosures, and one Chief Engineer's Report.

This is undoubtedly a very important object, and one which ought never to be lost sight of in schemes of this nature, but it occurs to me that a still more momentous desideratum is sure to be attained by the Palar Annicut, I mean that of effectually protecting the districts which it is intended to fertilise from all possibility of scarcity or famine, so far as human means are available to effect that end.

I therefore cordially and unhesitatingly commend and concur in the design, and propose that it be immediately submitted to the Honourable Court, with the strongest recommendation of this Government that it may meet with their early sanction.

25 May 1853.

(signed) Henry Pottinger.

Palar Annicut.

MINUTE by the Honourable Mr. Elliott.

PROJECT of an annicut across the Palar, near Arcot, to ensure the supply of water to the tanks on both sides of the river in the districts of North Arcot and Chingleput.

No. 49.

It is highly satisfactory that this long contemplated project, calculated to afford such substantial benefits to the country within its scope, and to secure a large augmentation to the revenue, while it will save it from fluctuation from the vicissitudes of season, has at last been made feasible. This we owe to the ability, zeal and energy of Captain Collyer, the civil engineer of the division. The Government has just brought to the notice of the Court of Directors the completion of the annicut across the Cheyar, in the district of North Arcot, by the same officer, by which greatly improved means of irrigation have been afforded to a tract of country bordering on that to which water will be furnished from the Palar by means of the annicut, and the subsidiary works to the south of the river comprehended in the present project. The efficient and rapid execution of the Cheyar Annicut, agreeably to the estimate for it, framed by Captain Collyer, warrants the Government in placing much confidence in the plans and estimates now submitted by him, in the preparation of which he has had the positive data to found upon obtained by actual experience in that work. The project has been revised by the chief engineer, whose experience and success in hydraulic works of this sort gives his opinion the highest value, and we are assured by him that the whole is admirably planned.

There are many fine tanks in the tracts upon both sides of the river, but they are chiefly supplied by the drainage from the surrounding country; they are, therefore, mainly dependent upon the periodical rains, which are extremely uncertain. The Caverypauk tank alone, which has a channel from the Palar, is pretty equally supplied; but this is only effected by means of annually repeated labour in the construction of a temporary bund, which any considerable rise of the river inevitably carries away. The variations in the collections of revenue during a period of 10 years in the talooks of North Arcot and Chingleput, which the annicut will influence, comparing the highest and the lowest, are found to average 107 per cent. Nothing can be more obvious than the advantages to the Government, and the people of an improvement calculated to produce equality instead of so great a fluctuation, which is owing entirely to irregularity in the supply of the tanks. The water to supply them is at hand in the river, and the annicut will save it for that purpose.

In the two districts, taking the highest collections as the standard of what would be at once certainly attained and permanently maintained, if the supply of water were made equal to that which was available in the years in which they were realized, and comparing that standard with the average of the last ten years, we have the means of ascertaining without doubt the minimum gain which the annicut and the auxiliary works would bring to pass. The amount of this in North Arcot is 36,721 rupees, and in Chingleput 81,082 rupees, total 1,17,803 rupees per annum. This gain we shall be made sure of if the annicut and the other works serve their purpose. Besides this sure return to Government for its outlay, there will be an equivalent gain, a free boon to the ryots.

But beyond this primary object of providing against fluctuation in the supply of water, and furnishing the means of irrigation permanently to the greatest extent occasionally attained to hitherto, the annicut will save from waste, water sufficient to replenish the tanks to that degree, that they will be capable of giving irrigation to lands, which, though classed as nunjah or wet, have long been left waste from want of water; and to lands classed as poonjah, or dry, which being served with water, may be made fit for the production of rice. Including the gain from these sources, Captain Collyer calculates the total profit at 1,32,082 rupees in Chingleput, and 52,821 rupees in North Arcot; but deducting 10 per cent. for repairs and superintendence, he makes the aggregate 1,68,159 rupees. The statements prepared by the Revenue officers promise still more favourable results.

Chingleput	-	1,18,800
North Arcot	-	47,359
		<hr/>
		Rs. 1,68,159

The estimates submitted by Captain Collyer for the annicut and channels of supply, amount to 5,73,625 rupees, but the Board have added 20,000 rupees to the estimate for the annicut, to provide for an apron which they judge to be necessary; and the amount of the estimates as revised by them is 5,95,968 rupees, of which 1,64,466 rupees will be the cost of the annicut. Captain Collyer is confident that his estimates are sufficient for the works provided for in them, and feels assured that he could complete the annicut in two seasons, and the whole of the works in three years.

The channels, he represents, ought to be extended eventually to the talooks of Triparoor and Chingleput, and he states roughly, not having had time to take the levels and calculate the cost exactly, that this extension will require a further outlay of about 78,000 rupees, for which there will be a return of about 28,000 rupees per annum.

The

Palar Annicut.

The chief engineer thinks the estimates liberal, but "considering the almost universal insufficiency of estimates, and that in a work of this nature we shall certainly find that various extra works may be executed in connexion with it," he advises "that two lacs be added under the head of contingencies and probable extra works." The Board of Revenue, Department of Public Works, recommends accordingly that if the project be approved, application be made for sanction to expend Rs. 7,95,968. 13. upon it, which they observe will cover the 78,000 rupees which Captain Collyer reckons will be required for the talooks of Triparoor and Chingleput.

I am of opinion that it is more advisable to submit the revised estimates for the sanction of the Honourable Court of Directors, with a request for authority to sanction additional estimates for the completion of the project, and for necessary supplemental works, to an amount not exceeding two lacs.

Rs. 66,903.

Taking the amount to be expended in the execution of the works provided for by Captain Collyer's estimates as revised by the Board to be 5,95,968 rupees, we find the certain and immediate minimum return (1,17,803 rupees as above stated) to come to about 20 per cent. on the outlay. But there is no room to doubt, that taking into account the other sources of gain above indicated, the return will be, if not immediately, in the course of a few years, very considerably enhanced. Taking it at only half of Captain Collyer's moderate estimate, or about 33,000 rupees, the gross gain will be 1,50,803 rupees, or, say a lac and a half, giving 25 per cent. on the outlay; allowing 10 per cent. for repairs and superintendence, as Captain Collyer does, there will remain a profit of 15 per cent. upon the capital expended, to cover interest, and gradually redeem the capital. If we assume that the ultimate expenditure will be 7,95,968 rupees, it is to be observed that the additional expenditure will probably be productive of additional revenue; thus for the 78,000 rupees for works in Triparoor and Chingleput, to be covered by the two lacs, it is expected there will be a return of 26,000 rupees.

Rs. 24,313.

Since the papers have come to me in circulation, a further letter has come up from the Board, stating that subsequently to the submission of the general project, Captain Collyer has ascertained that his original design for completely restoring the tank of Myandra Wady, near Cavarypauk, is practicable, at a cost of about 70,145 rupees in excess of what he allowed in his first estimate for its partial restoration, and proposing that this sum shall be added to the 7,95,968 rupees, stated above as the limit of the expenditure. As the complete restoration of the tank will no doubt produce an increase of revenue proportioned to the additional outlay, the computation of profit will not be disturbed. The grand total, with this addition, will be 8,66,114 rupees.

Upon these considerations I give my cordial approval to the whole project. In recommending the present estimates to the Honourable Court for special sanction, I would request their permission to sanction the further outlay required for the work last mentioned, on an approved estimate being submitted for it, over and above the two lacs extra, to the amount of the said estimates for necessary supplementary works.

28 May 1853.

(signed) D. Elliott.

## MINUTE by the Honourable Mr. Thomas.

No. 50.

LETTER from the Board of Revenue, Department Public Works, proposing the construction of the Palar Annicut, with draft Minutes of Consultation.

1. THESE papers having reached me in consequence of my temporary absence with the draft prepared, I have only to express my full concurrence in the recommendation of this project to the higher authorities. The value of such works in the districts in this Presidency dependent on the uncertain north-east monsoon, can scarcely be overrated. I must observe, however, in this case, that the Palar has not, like the "Godavery" and the "Kistnah," its sources in the Western Ghats, and it might be doubted therefore, whether it has that invariable supply which the south-west monsoon never fails to provide for those rivers. I accept, however, on this point, the statement of the civil engineer,\* though I should have wished that in lieu of this general statement, the Government had been furnished with well ascertained data, that in years such as 1823-24, 1832-33, the seasons of our severest droughts, the Palar would have then supplied the tanks.

2. It is in such seasons chiefly that these works are so invaluable, and repay the heaviest outlay, as they then preserve the lives of the agricultural labourers, and save the stock of a district.

3. There are other points also which do not seem to me to be sufficiently considered. The Board would appear to be of opinion, that all that is necessary is to bring a larger breadth of land under rice cultivation as early as possible, and then that both the revenue and the ryots will prosper; but it is manifest, whatever may be the advantage to the people or consumers generally, that unless measures are taken simultaneously with the execution of such works for remodelling the assessment, or for opening up new and additional markets, that if they

Note.—Captain Collyer proposes in this case to complete the works in three years.

\* Para. 2 of his memorandum of the 11th September 1851: "Even in the years in which the supply of the river has been most deficient, there has been enough, if properly applied, very materially to alleviate the ruinous fluctuations now experienced."

are not carried out very gradually, the additional produce these annicuts will instantly and annually create, must in average years so lower the price of grain, as materially to affect the ryots generally, more especially those whose lands are left exposed to the fluctuations of season.

Palar Annicut.

4. At present the tendency to low prices, which has shown itself steadily for some years, has been checked by the fluctuations and scanty produce of unfavourable years, and the ryot has obtained on an average of years a price for his produce approximating to the original commutation price of the district.\* But if the fluctuations of seasons are to be at end over large areas of land, the annicuts neutralizing them, and large additional quantities of ordinary grain are to be annually poured into the local market, it is difficult to say to what extent prices will fall, and the ryot's condition deteriorate under the present rate of assessment.

5. The Board would do well, I think, to consider this point; also, whether some modification of the rates of assessment may not be at once advisable on lands under these large works, which might lead to and stimulate the production upon the new land taken up instead of rice, of articles which would bear export, and so open the markets of the world to the additional produce raised, and relieve the home market from a superabundant supply of rice or ordinary grain.

6. A glance at the map will, I think, show that the local demand for home consumption can never take off the enormous additional produce which the annicuts of the "Godavery" and the "Kistna," and I should add that of the Palar, will bring almost immediately into existence, and without, therefore, some permanent extension of the market coincident and corresponding with this instant or early extension of production, a great fall of price must in a short time ensue if rice is chiefly raised. This fall may indeed enable Rajahmundry (especially as the ryot is there aided by large grants of tucavay) and Masulipatam to export largely, and probably to undersell the rice of Ganjam and Vizagapatam, where there is no such Government outlay on works of irrigation, but this will not benefit the State, and will rather raise in time one class of ryots at the expense of another.

*Note.*—Not depending as at present on the large mass of well paid labourers congregated on the works.

7. The Board should, it appears to me, examine more fully these features of these important works, and state whether any modification of the assessment will be advisable in districts where these large annicuts exist, either upon the lands not secured against the fluctuations of the north-east monsoon, or for stimulating the production of exportable products for the European market; further, whether it will not be necessary if the Palar annicut is sanctioned to call for plans, and carry out simultaneously lines of road to the large towns of the district, with other works, to facilitate the distribution of the additional produce which this annicut will yearly throw into the market.

8. I am disposed to think, looking to the low price of grain, that unless such works are executed at the same time with the annicuts and new markets found, that these works will lose in all ordinary years much of their value; it may be found, also, that the more gradual development of these works, progressing as society or population itself progresses, may be the most beneficial policy, when once a sufficient extent of land is irrigated to secure a district against the famines consequent upon the total failure of the north-east monsoon.

9. I have made these remarks now, because the time is near, if not come, when these questions should receive consideration, as but a short period will elapse before the Godavery works are in full operation, and the Kistnah will soon follow, as well as the Palar, and it appears to me not in the nature of things that population can increase so rapidly as to take off the enormous additional supplies to be so soon raised under these annicuts.

25 July 1853.

(signed) J. F. Thomas.

MINUTE by the Right Honourable the President.

No. 51.

MINUTE by the Honourable Mr. Thomas, dated the 25th of July 1853, on the Project for an Annicut across the Palaur River.

I suppose the above Minute, though placed on record after the draft Minutes of Consultations was prepared, will require to be forwarded with the rest of the papers on the matter to which it relates, and so far as it rests with me, I entirely approve of that being done.

I consider the remarks made by the Honourable Mr. Thomas to be equally sound and well grounded, and it strikes me to be desirable that they should be looked into before the matter goes farther.

The chief point to be ascertained, appears to me to be the capability of the Palaur River to supply the tanks that are to be fed by means of the annicut, with water in seasons on which

\* The draft Minutes of Cons. now in circulation on the North Arcot annual settlement for 1851-52, exhibit in a striking manner the extent to which prices fell in this very locality of the Palar Annicut in years of abundance. It is there observed, "in consequence of the increased extent of cultivation in so propitious a season, the price of grain underwent a great decline as compared with the rates obtaining in the preceding year. The prices in the principal and sub-division were respectively 15 and 21 per cent. below those of Fusly 1850, and 31 and 39 per cent. below the commutation rates."—Extract Minutes Cons., 11 August 1853, p. 2.

Palar Annicut.

which the north-east monsoon may wholly or partially fail, as it is self-evident that such scanty seasons will be those on which the advantages and blessings anticipated from the work will be of the greatest value to the country and people.

I would therefore advise, that the Board of Revenue be called on to report, in concert with the civil engineer of the Fourth Division on this momentous question, to the success of the whole plan.

The next point to which the Honourable Mr. Thomas refers, is the possible necessity for a revision of the assessment, so as to assist in retaining the prices of grain when the full effects of the annicut shall have brought a large additional extent of land under cultivation, at such rates as will prove remunerative, and I concur with my honourable colleague in proposing that this point be likewise referred for the mature consideration of the Revenue Board; at the same time I think it right to state, so far as I can judge from my comparatively short experience of the fluctuations of the seasons in this part of India, that I deem it probable that the superabundant produce in one district will often be needed to compensate for deficiency in others, and I also see abundant reason to hope that extension of cultivation under the different annicuts will in due time not be confined to rice and grain, but will embrace a vast increase of sugar, indigo, the manufacture of rum and other articles adapted to the markets of England and foreign Europe.

The improvement and extension of roads to open up the districts to be fertilised by the annicuts is of the highest moment, and ought to engage early attention; this seems to me to be particularly desirable in the districts through which the waters of the Palar Annicut are to flow, as there are, I fancy, in them, no means of forming canals such as will partly answer the purpose of roads in Rajahmundry, Masulipatam and the other northern districts, where the face of the country is level, and the supply of water certain and superabundant.

2 August 1853.

(signed) H. P.

MEMO. by the Honourable Mr. Elliott.

No. 52.

I HAVE no objection to the reference to the Board of Revenue proposed by the President in the 3d para. of the above memo.

On the effects of extended cultivation by such works as the proposed annicut on the Palar, I have recorded my views in the 95th para. of my minute on the Report of the Commissioners on Public Works, and in the following para. I have expressed my opinion that it behoves Government, while it provides the means for increased production, to provide also, and simultaneously, all possible facilities for the transport of produce by means of good roads, canals, &c. I need not therefore enter particularly upon these topics at present, and as they will come under consideration of Government in a general view in the discussion of the report referred to, I would suggest that no instructions of the nature proposed be communicated to the Board of Revenue; in the meantime I deprecate any meddling with the assessment in anticipation of results which are altogether speculative. The Board have received instruction to give the most careful attention to the effect of the current prices on the revenue, and I do not think anything more is needed at present.

5 August.

(signed) D. E.

No. 1,046.

No. 53.

In the above letters the Board of Revenue in the Department of Public Works submit, for the consideration of Government, the project of an annicut across the Palar River near Arcot, to ensure the supply of water to the tanks on both sides of the river, in the districts of North Arcot and Chingleput.

2. This long contemplated project, so well calculated to afford substantial benefit to the country within its scope, and to secure a large augmentation to the revenue, no less than to save it from fluctuations from the vicissitudes of season, has at last been made feasible by the ability, zeal and energy of Captain Collyer, the civil engineer of the division. The Honourable Court of Directors have just been informed of the completion of the annicut across the Cheyar, in the same district, a work also planned and executed by Captain Collyer, and by which greatly improved means of irrigation have been afforded to a tract of country bordering on that to which water will be furnished from the Palar, by means of the annicut and the subsidiary works to the south of the river, comprehended in the present project. The efficient and rapid execution of the Cheyar Annicut within the amount\* estimated for it, enables the Government to receive with confidence the plans and estimates for the Palar now submitted, especially as Captain Collyer has had, in their preparation, the data obtained by actual experience in the former work. The project has been revised by the chief engineer, whose experience and success in hydraulic works gives his opinion the highest value, and the Government have his assurance that the whole is admirably planned.

3. The Government are aware that many fine tanks in the tracts upon both sides of the river are chiefly supplied by the drainage from the surrounding country, and are therefore mainly dependent upon the periodical rains, which are extremely uncertain. The Cavery-pauk tank, which has a channel from the Palar, is alone pretty equally supplied, but this is only effected by means of labour, annually repeated, in the construction of a temporary bund, which any considerable rise of river inevitably carries away. The variations in the collections

Para. 5 of Letter,  
dated 22 August  
1853, No. 53.

\* Rs. 31,475.

tions of revenue during a period of 10 years, in those talooks of the North Arcot and Chingleput districts, which will come under the influence of the annicut, comparing the highest and the lowest, are found to average 107 per cent., and nothing can be more obvious than the advantage to the Government and the people, of an improvement calculated to produce equality instead of so great a fluctuation, which is owing entirely to irregularity in the supply of the tanks. The water to supply them is at hand in the river, and the annicut will save it for that purpose.

Palur Annicut.

4. Taking the highest collections in the two districts as the standard of what would be at once certainly attained, and permanently maintained if the supply of water were made equal to that which was available in the years in which they were realized, and comparing that standard with the average of the last 10 years, the result will show the minimum gain which the annicut and the auxiliary works would produce. The amount of this in North Arcot is 36,721 rupees, and in Chingleput, 81,082 rupees, making a total gain of 1,17,803 rupees per annum, if the annicut and its subsidiary works serve their purpose, besides the equivalent gain to the ryots.

5. But beyond the primary object of providing against fluctuation in the supply of water, and furnishing the means of irrigation permanently to the greatest extent occasionally attained hitherto, the annicut will save from waste, water sufficient to replenish the tanks and make them capable of giving irrigation to lands, which though classed as nunjah or wet, have long been left waste from want of water, and to lands classed as poonjah or dry, which being served with water may be made fit for the production of rice. Including the gain from these sources, Captain Collyer calculates the total profit at 1,32,082 rupees in Chingleput, and 52,621 rupees in North Arcot, but deducting 10 per cent. for repairs and superintendence, he makes the aggregate 1,66,159 rupees.\* The statements pre-  
Chingleput, Rs. 1,18,800  
North Arcot - 47,359

Rs. 1,66,159

6. The estimates submitted by Captain Collyer, for the annicut and channels of supply, amount to 5,73,525 rupees, but to this, the Board of Revenue have added 20,000 rupees for an apron to the annicut, which they consider necessary, thus making the aggregate 5,95,968 rupees, of which the sum of 1,64,466 rupees appertains to the annicut alone. Captain Collyer is confident that his estimates are sufficient for the works provided for in them, and feels assured that he could complete the annicut in two seasons, and the whole of the works in three years.

7. The channels he represents ought to be extended eventually to the talooks of Triparoor and Chingleput, and he states roughly, not having had time to take the levels and calculate the cost exactly, that this extension will require a further outlay of about 78,000 rupees, for which a return of about 26,000 rupees per annum may be expected.

8. The chief engineer thinks the estimates liberal, but "considering the almost universal insufficiency of estimates, and that in a work of this nature the Government will certainly find that various extra works may be executed in connexion with it," he advises that two lacs be added, under the head of contingencies and probable extra works.

9. The Board of Revenue recommend accordingly, that if the project be approved, application be made for sanction to expend Rs. 7,95,968. 13. upon it, which they observe will cover the sum of 78,000 rupees which Captain Collyer reckons will be required for the talooks of Triparoor and Chingleput. The Government, however, think that it would be more advisable to submit the revised estimates for the sanction of the Honourable Court of Directors, with a request for authority to sanction additional estimates for the completion of the project, and for necessary supplemental works, to an amount not exceeding two lacs.

10. Taking the amount to be expended in the execution of the works provided for by Captain Collyer's estimates, as revised by the Board, to be 5,95,968 rupees, the certain and immediate minimum return will be as above stated, 1,17,803 rupees, or about 20 per cent. on the outlay; but there is no room to doubt, that taking into account the other sources of gain above indicated, the return will be, if not immediately, in the course of a few years, very considerably enhanced. Taking it at only half of Captain Collyer's moderate estimate,† or about 33,000 rupees, the gross gain will be about a lac and a half of rupees, or 25 per cent. on the outlay; allowing 10 per cent. for repairs and superintendence, as Captain Collyer does, there will yet remain a profit of 15 per cent. upon the capital expended, to cover interest, and gradually redeem the principal itself. If it be assumed that the ultimate expenditure will amount to 7,95,968 rupees, the additional expenditure will probably be productive of additional revenue; thus, for the sum of 78,000 rupees for works in Triparoor and Chingleput to be covered by the additional two lacs, it is expected there will be a return of 26,000 rupees.

† Rs. 66,903.

11. In their further letter of the 16th May, the Board of Revenue submit that Captain Collyer's original design for completely restoring the tank of Myandrawady, near Caverypauk, is practicable at a cost of about 70,146 rupees in excess of what he allowed in his first estimate ‡ for its partial restoration, and propose that this sum be added to 7,95,968 rupees † stated above as the limit of the expenditure. The complete restoration of the tank will no doubt produce an increase of revenue proportioned to the additional outlay, and the computation of profit will not therefore be disturbed. The grand total, with this addition, will be 8,66,114 rupees.

† Rs. 24,313.

12. Upon a consideration of all the circumstances detailed in the preceding paragraphs, the Right honourable the Governor in Council resolves to submit the correspondence relating to the project of the Palur Annicut to the Government of India, with his earnest and strong recommendation



Palar Annicut.

recommendation in favour of it, and with a request that the same may be forwarded for the early decision of the Honourable Court of Directors, and their sanction obtained to the revised estimates submitted by the Board of Revenue, amounting to 5,95,968 rupees, and that this Government may be authorized to sanction additional estimates for the completion of the project, and for necessary supplemental works, to an amount not exceeding two lacs, as well as the further outlay that may be required for the complete restoration of the Myandavady tank, on an approved estimate being submitted for it.

13. The Government, in considering this project, have relied on the statement of the civil engineer, that "even in the years in which the supply of the river has been most deficient, there has been enough, if properly applied, materially to alleviate the ruinous fluctuations now experienced," but remembering that the Palar has not, like the Godavery and the Kistna, its sources in the Western Ghats, there is reason to doubt that it has invariably that full supply which the south-west monsoon never fails to provide for those rivers, and it becomes of importance to ascertain, as accurately as possible, whether in years such as 1823-24 and 1832-33, the supply received by it during the whole year being entirely saved by the annicut, would have thrown into the tanks a quantity of water sufficient at least to raise food enough to preserve the lives of the agricultural population, and at the same time to save the stock from perishing from drought; if sufficient for this object alone in such years, the work would well repay its cost. The Governor in Council desires that the Board of Revenue, in concert with the civil engineer, will make a careful inquiry, and report on this point.

14. The Governor in Council considers it a matter of essential importance to combine with works of this nature, calculated to increase production, measures to be executed simultaneously for opening up new markets, in order that the local market may not be overcharged by the increased produce, while a sufficient demand might be found for it at places to which it could readily be carried by means of good roads, &c.; he therefore desires that the civil engineer be directed to give his attention to the planning of lines of roads to the large towns within a practicable range, with other works, to facilitate the distribution of the additional produce which this annicut may be expected yearly to throw into the market, with a view to submitting a scheme for that object, in the event of the present project receiving the sanction of the Honourable Court.

Ordered, that the foregoing proceedings be brought early to the notice of the Honourable the Court of Directors.

Fort St. George,  
13 September 1853.

(signed) *H. C. Montgomery,*  
Chief Secretary.

Calicut Canal.

## Calicut Canal; Agoombie Ghaut.

EXTRACT Public Works General Letter from Madras, dated 17 May (No. 3) 1847.

Para. 5. ACCOMPANYING is a correspondence with the Government of India\* on the proposals we submitted to that Government for the construction of the under-mentioned important works:

	Rs.	a.	p.
Canal to connect the Ellatoor Backwater with the Calicut River	16,202	2	6
Road from the foot of the Agumbie Ghaut to the sea coast	17,623	12	5
Dike with sluices along the eastern bank of the Godavery River	34,994	10	11

6. It will be seen, that of these three works, the Government of India have authorized the outlay required for the proposed canal to connect the Ellatoor Backwater with the Calicut River in Malabar, a distance of six miles. This extent of canal was alone wanted to perfect the water communication for a distance of 134 miles during the dry season, or 224 miles during the rains, and the execution of the work was strongly urged by the local revenue and engineer officers, as one greatly calculated to advance the prosperity of the district.

7. We

\* Diary to Cons., 11 November 1845, Nos. 13, 14; Cons., 2 January 1846, Nos. 1 to 3; 20 January 1846, Nos. 5, 6; 10 February 1846, Nos. 11 to 13; 16 December 1845, Nos. 5, 6; 10 February 1846, Nos. 7, 8; Diary, 2 March 1847, Nos. 9, 10; Revenue Cons., 10 March 1846, Nos. 56, 57; Revenue Diary, 16 June 1846, Nos. 29, 30; Cons., 2 June 1846, No. 5; 25 August 1846, Nos. 9, 10; Revenue Diary, 2 February 1847, Nos. 43 to 45.

7. We request the attention of your Honourable Court to the correspondence recorded in our consultation of the 2d February last, on the subject of maintaining permanent embankments to rivers, respecting which the Government of India suggested that a scientific inquiry should be instituted to ascertain the effect of such embankments in this Presidency.

Calicut Canal.

EXTRACT Public Letter to Fort St. George, dated 31 May (No. 12) 1848.

14. The connexion of the Ellatoor Backwater with the Calicut River completes a continuous line of communication by water, and appears to be a work of great utility to traffic.

Letter from, dated 17 May (No. 3) 1847; paras. 5 to 7. An estimate of Rs. 16,309. 2. 6. for constructing a canal to connect the Ellatoor Backwater with the Calicut River, has been sanctioned by the Government of India, but a proposal to form a road from the foot of the Ajumbie Ghaut to the coast, and to construct a dike, with sluices, along the eastern bank of the Godavery, has not been sanctioned.

15. The other works recommended by you, we observe the Government of India have, on financial grounds, declined to sanction.

EXTRACT from the Proceedings of the Honourable the President of the Council of India in Council, in the Home Department, under date 23 November 1849.

No. 222.

From *W. H. Bayley*, Esq., Acting Secretary to the Government of Fort St. George, to *F. J. Halliday*, Esq., Secretary to the Government of India.

No. 13.

Sir,

Para. 1. I AM directed by the Right honourable the Governor in Council to submit, for the consideration of the Government of India, a copy of the correspondence noted in the margin,\* on the subject of opening a communication from the Agumbie Ghaut to the town of Mangalore, and on the further sum required to complete and render it available for cart traffic.

Public Works Department.  
See below.

2. Under the views recorded in an extract from the Minutes of Consultation of this day's date, the Governor in Council requests the authority of the Government of India, for the disbursement of the further sum of 7,000 rupees required for the above purpose.

I have, &c.

(signed) *W. H. Bayley*,  
Acting Secretary to Government.

Fort St. George, 2 November 1849.

No. 825.

From *W. Grey*, Esq., Under Secretary to the Government of India to *W. H. Bayley*, Esq., Acting Secretary to the Government of Fort St. George.

No. 16.

Sir,

I AM directed to acknowledge the receipt of your letter, No. 222, dated the 2d instant, with enclosures, requesting sanction to the expenditure of a further sum of 7,000 rupees to complete the communication from the Agumbie Ghaut to the town of Mangalore, and render it available for cart traffic.

2. I am desired to intimate the strong dissatisfaction with which the President in Council has perused the papers connected with this application, evidencing as they do, the careless and discreditable proceedings of some of the local officers immediately concerned, in submitting to the Government loose and imperfect information in a case where a considerable outlay of the public money was in question. His Honour in Council would wish to be informed who is the officer to whom allusion is made in para. 4 of the Consultations of the Madras Government, as being especially culpable for misleading the Government in this case.

3. As

\* From Board of Revenue, 23 June 1848, No. 445, and Order; from Board of Revenue, 24 Aug. 1848, No. 640, and Order; from Board of Revenue, 4 October 1849, No. 741, with all the papers referred to (requested to be returned, being originals, 6); Extract Minutes Cons., 6 Nov. 1849, No. 221.

Calicut Canal.

3. As the matter is now submitted, the President in Council apprehends that he cannot withhold sanction to the additional expenditure which is applied for, without risking the loss of all that has been done; but his Honour in Council sanctions the outlay with great reluctance, and he relies upon the Madras Government, that at all events, it will be the last expenditure required for the same work.

Fort William,  
23 November 1849.

I have, &c.  
(signed) *W. Grey,*  
Under Sec. to the Govt. of India.

EXTRACT from the Proceedings of the Honourable the President of the Council of India in Council, in the Home Department, under date 26 April 1850.

No. 68.

No. 28. From Sir *H. C. Montgomery*, Bart., Chief Secretary to the Government of Fort St. George to *F. J. Halliday*, Esq., Secretary to the Government of India.

Public Works Department.

Sir,  
I AM directed by the Right honourable the Governor in Council to transmit copy of a letter from the Board of Revenue in the Department of Public Works, dated 18 March 1850 (No. 242), affording the information called for in para. 2 of Mr. Under Secretary Grey's letter of the 22d November last.

Fort. St. George, 9 April 1850.

I have, &c.  
(signed) *H. C. Montgomery,*  
Chief Secretary.

Road from Bellary to Dharwar.

Road from Bellary to Dharwar.

EXTRACT Public Works General Letter from Madras, dated 12 September (No. 6) 1851.

Cons. 24 Dec. 1850, Nos. 9 to 11; 31 January 1851, Nos. 36, 37; 4 Mar. 1851, Nos. 12, 13; 22 July 1851, Nos. 3, 4.

Para. 21. WITH their letter, dated 17th October 1850, the Board of Revenue in the Department of Public Works, submitted an estimate amounting to Rs. 26,344. 15. for the improvement of the line of road (64 miles in extent), leading through the Bellary district to Dharwar, satisfied that the proposed outlay for facilitating traffic generally on that line was advisable, and that it would be attended with advantage, particularly to the large and populous town of Bellary, the head-quarters of a division of the army, and one of the considerable cantonments under the Presidency; we forwarded the correspondence to the Government of India, with our recommendation, that the proposed amount might be sanctioned, with an additional sum of 2,400 rupees for European superintendence.

EXTRACT Public Works General Letter from Madras, dated 6 August (No. 9) 1852.

Improvement of the road leading through the Bellary district to Dharwar. Cons., 19 August 1851, Nos. 1, 2; 28 Oct. 1851, Nos. 15, 16.

Para. 4. REFERRING to para. 21 of our letter in this Department, dated the 12th September 1851, No. 6, we have the honour to report that the Government of India have sanctioned the outlay we recommended for the improvement of the road (64 miles in extent), leading through the Bellary district to Dharwar, amounting to Rs. 28,744. 15.

FOR PUBLIC WORKS IN MADRAS, 1847 TO 1853. 61

From Sir *H. C. Montgomery*, Bart., Chief Secretary to Government to *F. J. Halliday*, Esq., Secretary to the Government of India. Road from Bellary to Dharwar.

Sir,

I AM directed by the Right honourable the Governor in Council to submit, for the early consideration and orders of the Government of India, the correspondence noted in the margin,\* together with an extract from the Minutes of Consultation of this day's date, and to solicit sanction for an outlay of Rs. (28,744. 15.) twenty-eight thousand seven hundred and forty-four and annas fifteen, for the improvement of the line of road leading through the Bellary district to Dharwar. \* See below.

(signed) *H. C. Montgomery*,  
Chief Secretary.  
Fort St. George, 24 December 1850.

EXTRACT Fort St. George Public Works Consultation of 4 March 1851.

Read the following letter:—

No. 80.

From *W. Grey*, Esq., Under Secretary to the Government of India, to Sir *H. C. Montgomery*, Bart., Chief Secretary to Government, Fort St. George.

Sir,

I AM directed to acknowledge the receipt of your letter, No. 275, dated the 24th December last, with enclosures, soliciting sanction for an outlay of Rs. 28,744. 15. for the improvement of the line of road leading through the Bellary district to Dharwar.

2. Previous to entertaining the proposition for the expenditure of so large a sum of money as that for which sanction is solicited, the President in Council would wish to be in possession of further information to enable him to come to a decision as to the necessity for the outlay. All that appears from the documents before him is, that at different times, within the last seven years, sums of money have been expended on this road, amounting altogether to 22,137 rupees, and that now a larger sum (28,745 rupees) is required than the total of the former expenditure, to render the entire line practicable for carts, and probably to prevent the loss of what has been already expended, and even a yet larger sum is mentioned (47,000 rupees) as not unlikely to be eventually required for bridging the nullahs, which intersect this line of road. With the prospect of so considerable an outlay, his Honour in Council considers it necessary to satisfy himself as to the advantages which the road is likely to afford, and especially information should be furnished as to the extent of trade which now passes, and which is expected to pass by this route.

(signed) *W. Grey*,  
Under Sec. to the Govt. of India.  
Fort William, 31 January 1851.

From Sir *H. C. Montgomery*, Bart., Chief Secretary to Government, to the Secretary to the Government of India.

Sir,

I AM directed to acknowledge the receipt of Mr. Grey's letter of the 31st January last, No. 180, and in reply to transmit the accompanying communication† from the Board of Revenue in the Department of Public Works, with its enclosures, supplying the information required by the Government of India, regarding the advantages to be derived from the improvement of the line of road leading through the Bellary district to Dharwar. † 30 June 1851, No. 579.

The attention of the President in Council is especially solicited to the Report of the Collector of Bellary, dated 26th May last, and to the 5th and 7th paras. of the Board's letter, herewith transmitted, as affording full information on the points

\* From Board of Revenue, Department Public Works, 17 October 1850, No. 979, with eight original enclosures, excluding survey, which is inconveniently bulky for transmission by post.

Road from Bellary to Dharwar. points noticed by his Honour in Council, and which need not therefore be repeated in this communication.

The Governor in Council trusts that the Government of India will be satisfied that the proposed outlay for facilitating traffic generally on the line is advisable, and that it will be attended with advantage, particularly to the large and populous town of Bellary, the head-quarters of a division of the army, and one of the considerable cantonments in the Madras Presidency.

Estimate - 26,344 15. With these remarks, I am directed again to solicit sanction for the estimate for the improvement of the road in question, amounting, inclusive of Superintendence 2,400 - the further sum added for European superintendence, to Rs.28,744. 15.

Rs. 28,744 15

(signed) *H. C. Montgomery,*  
Chief Secretary.

Fort St. George, 21 July 1851.

(True extract.)

(signed, J. D. Sim, As Dy Secy to Govt.

Bridge over the Cooum.

Bridge over the Cooum.

EXTRACT Public Letter from Fort St. George, dated 12 October (No. 21) 1847.

In Cons. 22 June 1847; in Diary, Cons. 10. August 1847; 31 August 1847.

15. THE bridge across the Cooum River, near Chindadrepettah, having been destroyed by the late hurricane, and as great inconvenience was experienced in consequence, the traffic in that vicinity being large, we have, with the concurrence of the Government of India, sanctioned the construction of a new bridge, at a cost of Rs.25,182. 11. 5, suggesting to the Military Board that if they thought it advisable, the bridge or a part of the work might be erected by contract.

EXTRACT Public Letter to Fort St. George, dated 13 February (No. 3) 1850.

Letter from, dated 12 October (No. 21) 1847; (p. 15; also No. 1 of 1848, p. 4 and 5); 29. This expense appears to have been necessary. A disbursement (by tender) of Rs. 22,424. 4. 3, sanctioned with the concurrence of the Supreme Government, for erecting a bridge over the river Cooum at Chindadrepettah, to replace one destroyed by the hurricanes of 1846; also, an expense of Rs. 736. 10. 4. sanctioned for a temporary bridge.

EXTRACT Fort St. George Public Consultations, dated 22 June 1847.

No. 38.

No. 46. From *J. F. Thomas*, Esq., Chief Secretary, Fort St. George, to *G. A. Bushby*, Esq., Secretary to the Government of India.

Sir,

Dated 4 June 1847.

I AM desired by the Most Noble the Governor in Council to transmit the accompanying copy of a letter from the Military Board, with plans and estimates, for re-establishing a thoroughfare across the Cooum River near Chindadrepettah, the bridge in that vicinity having been destroyed by the late hurricane; and, as great inconvenience is experienced in consequence, to request the sanction of the Supreme Government to the construction of a new bridge, according to plan marked C., at an expense of Rs.25,182. 11. 5.

2. This bridge will be chiefly useful to the Native community, and as the traffic at Chindadrepettah is large, and plan C. alone provides for a sufficiently wide roadway at a small increased cost of only 3,427 rupees, it is recommended for adoption.

I have, &c.  
(signed) *J. F. Thomas,*  
Chief Secretary.

Fort St. George, 22 June 1847.

FOR PUBLIC WORKS IN MADRAS, 1847 TO 1853.

63

EXTRACT Fort St. George Public Consultations, 17 August 1847.

Bridge over the  
Cooum.

No. 634.

From *G. A. Bushby*, Esq., Secretary to the Government of India, to *J. F. Thomas*, Esq., Chief Secretary to Government, Fort St. George

No. 3.

Sir,

I AM directed to acknowledge the receipt of your letter, No. 33, dated the 22d ultimo, with enclosures, and in reply to state, that the President in Council is pleased, in compliance with the recommendation of the Most Noble the Governor in Council, to sanction the estimate there submitted for the construction of a new bridge across the Cooum River between Chindadrepettah and Percametto, amounting to Rs. 25,182. 11. 5.

2. The original enclosures of your letter are returned.

I have, &c.

(signed) *G. A. Bushby*,  
Secretary Government, India.

Fort William, 17 July 1847.

EXTRACT Fort St. George Public Consultations, dated 31 August 1847.

No. 675.

From *G. A. Bushby*, Esq., Secretary to the Government of India, to *J. F. Thomas*, Esq., Chief Secretary to Government, Fort St. George.

No. 1.

Sir,

WITH reference to your letter to the address of Mr. Secretary Dorin, No. 45, dated the 13th ultimo, and enclosure, I am directed to request that the expenditure to which the sanction of the President in Council is therein required may be submitted in the usual tabular form.

I have, &c.

(signed) *G. A. Bushby*,  
Secretary to the Government of India.

Bridges over the Cuddembella Holla and Cubbintial Holla.

Bridges.

Public Works Department, No. 5 of 1850.

To the Honourable the Court of Directors of the East India Company.

Honourable Sirs,

WE have the honour to submit, for the consideration and orders of your Honourable Court, copies of communications from the Board of Revenue in the Department of Public Works, and of notes and minutes recorded by the members of Government, and of the proceedings adopted by us in respect of two bridges over the Cuddembella Holla and Cubbintial Holla Streams, on the Canara portion of the Munzerabad Ghaut.

Diary to Cons., 2  
June 1850, Nos. 1  
and 2; Ditto, 17  
Dec. 1850.

We have, &c.

(signed) *Henry Pottinger*,  
*D. Elidit*,  
*J. F. Thomas*.

Fort St. George, 13 December 1850.

Devamanny Ghaut.

Devamanny  
Ghaut.

Public Works Department, No. 10 of 1847.

To the Honourable the Court of Directors of the East India Company.

Honourable Sirs,

REFERRING to para. 8 of our letter in this department, dated 7th March 1846, Cons. 31 August No. 5, we have the honour to submit copy of a further correspondence upon the necessity

64 CORRESPONDENCE RELATIVE TO EXPENDITURE

Devamanny  
Ghaut.

necessity of improving the Devamunny Ghaut, which we have laid before the Government of India, soliciting their attention to the estimate previously submitted by us for that project.

We have, &c.  
(signed) Tweeddale.  
H. Chamier.  
H. Dickinson.

Fort St. George, 26 August 1847.

EXTRACT Public Works General Letter from Madras, 22 December (No. 15) 1847.

Cons., 7 September  
1847, Nos. 13, 14;  
12 October 1847,  
Nos. 3, 4; 19 Oct.  
1847, Nos. 13, 14;  
Diary, 19 October  
1847, Nos. 5, 6;  
Cons., 16 Nov.  
1847, Nos. 5, 6;  
Diary, 9 Nov. 1847,  
Nos. 9, 10.

Para. 4. REFERRING to our letter of the 26th August last, No. 10, we transmit copy of a further correspondence on the subject of improving the Devamanny Ghaut, from which your Honourable Court will learn that the Government of India have authorized an outlay of 9,000 rupees for the formation of a bandy trace to a width sufficient for laden bullocks from Sircy to Dewgar. The partial improvement now sanctioned, it is expected, will be of considerable benefit to the transit of cotton, by enabling the carriage bullocks to travel on a far better line than that of Neelcond.

EXTRACT Public Letter to Fort St. George, dated 22 August (No. 14) 1849.

Letter dated 26 August (No. 10)  
1847; also, p. 4, of Letter dated 22  
December (No. 15) 1847; Estimate of  
9,000 rupees sanctioned for improving  
the Devamanny Ghaut.

Para. 14. WE approve of the outlay sanctioned by the Govern- ment of India for the formation of a line for bullock traffic from Sircy to Coompta, at a cost of 9,000 rupees, pending our decision on the larger estimate submitted with your letter of the 18th October 1845, our approval of which was communicated to the Govern- ment of India in a despatch of 8th September 1847; but we wish it to be distinctly understood, that that amount must be considered as forming a portion of the original estimate, and must not be taken as a separate charge.

Public Works Department, No. 169.

To G. A. Bushby, Esq., Secretary to the Government of India.

Sir,

REFERRING to the letter to your address, dated 9th September 1845, and your reply thereto of the 18th October following, I am directed by the Most Noble the Governor in Council to transmit an extract from the diary of Captain F. C. Cotton, civil engineer of the Seventh Division, and an extract from the Minutes of Consultation of this day's date, and to solicit the attention of the Government of India to the estimate forwarded by this Government for opening the communication by the Devamanny Ghât for wheeled carriages, the necessity of which is forcibly depicted in the correspondence now submitted.

(signed) H. C. Montgomery,  
Secretary to Government.

Fort St. George, 26 August 1847.

No. 182.

No. 14.

From Sir H. C. Montgomery, Bart., Secretary to Government, to G. A. Bushby, Esq., Secretary to the Government of India.

Sir,

WITH reference to the papers transmitted with my letter of the 26th ultimo, No. 169, I am directed by the Most Noble the Governor in Council to submit, for the favourable consideration and early orders of the Government of India, copy of a letter from the Board of Revenue, giving cover to a correspondence and an estimate amounting to 9,900 rupees, for opening for bullock traffic the trace of the Devamanny Ghaut, and of the roads above and below towards Sirci and Coompta.

Dated 19 August  
1847, No. 683.

2. His

2. His Lordship in Council agrees with the Board of Revenue, that even the partial improvement of the ghaut now proposed will be a great benefit, and recommends, accordingly, that the estimate submitted may receive sanction; and this, considering how short is the period for prosecuting works of this nature in Canara, and the difficulty of procuring labourers, he would request should be given at an early period, that advantage may be taken of the present season for commencing operations.

Devamanny  
Ghaut.

(signed) *H. C. Montgomery,*  
Secretary to Government.

Fort St. George, 7 September 1847.

EXTRACT Fort St. George Public Works Consultation, 12 October 1847.

READ the following letter:—

No. 819.

From *G. A. Bushby*, Esq., Secretary to the Government of India, to Sir *H. C. Montgomery*, Bart., Secretary to Government, Fort St. George.

No. 3.

Sir,

I AM directed to acknowledge the receipt of your letter, No. 169, dated the 26th ultimo, with enclosures, and, in reply, to state, for the information of the Most Noble the Governor-general in Council, that the President in Council is pleased to authorize an outlay of 9,000 rupees for the formation of a bandy trace, to a width sufficient for laden bullocks from Sirey to Dewga, so planned that it may be converted into a regular road hereafter upon the Dewamanny Pass, when the latter has received the sanction of the Honourable Court of Directors.

2. General Cubbeen has been already requested to report to the Government of India on the subject of the transit duties in the Mysore country.

(signed) *G. A. Bushby,*  
Secretary to the Government of India.

Fort William, 18 September 1847.

EXTRACT Fort St. George Public Works Consultation, 19 October 1847.

READ the following letter:—

No. 851.

From *G. A. Bushby*, Esq., Secretary to the Government of India, to Sir *H. C. Montgomery*, Bart., Secretary to Government, Fort St. George.

No. 13.

Sir,

I AM directed to acknowledge the receipt of your letter, No. 182, dated the 7th instant, with enclosures, and to refer you to my letter, No. 819, of the 18th idem, authorizing an outlay of 9,000 rupees for the formation of a bandy trace, to a width sufficient for laden bullocks from Sirey to Dewga.

(signed) *G. A. Bushby,*  
Secretary to the Government of India.

Fort William, 25 September 1847.

EXTRACT from the Proceedings of the Honourable the President of the Council of India, in Council, in the Home Department, under date 4 December 1847.

No. 1,106.

From *G. A. Bushby*, Esq., Secretary to the Government of India, Home Department, to the Secretary to the Government of Fort St. George.

No. 3.

Sir,

WITH reference to the letters noted in the margin,\* I am directed by the President in Council to transmit to you, for the information of the Most Noble

\* To Fort St. George, dated 18 October 1845, No. 734; 16 Aug. 1845, No. 549.



Devamany Ghaut. the Governor in Council, the accompanying extracts from a despatch\* from the Honourable the Court of Directors, No. 21, dated 8th September last.

\* Para. 40 and 41.

I have, &c.  
(signed) G. A. Bushby,  
Secretary to the Government of India,

Fort William, 4 December 1847.

Road from Madras to Vicravandy.

Road from Madras to Vicravandy.

EXTRACT from the Proceedings of the Honourable the President of the Council of India, in Council, in the Home Department, under date 13 Feb. 1847.

No. 18.

No. 14. From J. F. Thomas, Esq., Chief Secretary to the Government of Fort St. George, to G. A. Bushby, Esq., Secretary to the Government of India.

Sir,

Public Works Department.

Para. 1. I AM directed by the Most Noble the Governor in Council to acknowledge the receipt of your letter of the 31st October last, drawing the attention of this Government to the orders of the Honourable Court of Directors in their despatch, Judicial Department, No. 10, dated 22d July 1846.

Public Department.

2. I am instructed to observe that, under the orders of the Honourable Court of the 23d September 1845, No. 38, the Government of Fort St. George is empowered to disburse annually a sum of four lacs of rupees in the formation of trunk roads throughout the Presidency, with the proviso, that before a work of this nature is undertaken, the specifications and the amount of expenditure on the work shall be submitted to the Court of Directors. The instance to which your letter refers is one expressly provided for by the Honourable Court's orders; and as this Government has not disbursed the amount of four lacs duly authorized by the Court, it did not appear to his Lordship in Council to come within the scope of the orders of the Honourable Court, in the Judicial despatch referred to by the Honourable the President in Council.

3. I am instructed to forward a copy of the Honourable Court's despatch, and of the Minute of the President, which will more fully explain the reference to the Honourable Court, and to add, that by a recent despatch, dated 11th November 1846, No. 31, the Honourable Court have sanctioned the estimate for the extension of the southern trunk road from Madras to Vicravandy. A copy of this despatch also accompanies this letter.

I have &c.  
(signed) J. F. Thomas,  
Chief Secretary.

Fort St. George, 28 January 1847.

Road from Mercara to Veerajenderpett.

Road from Mercara to Veerajenderpett.

EXTRACT Public Works Letter from Madras, dated 25 September (No. 11) 1848.

5. YOUR Honourable Court will observe, from the communication recorded in Consultation of the 2d May last, that an outlay of 3,000 rupees has been sanctioned by the Government of India, for the purpose of repairing the road from Mercara to Veerajenderpett, in the province of Coorg.

EXTRACT

EXTRACT Fort St. George Public Works Diary to Consultation, of 2 May 1848.

Road from Mercara  
to  
Veerajenderpett.

17 April.—Received the following letter:—

No. 571.

From *J. Dorin*, Esq., Secretary to the Government of India, to the Chief  
Secretary to the Government of Fort St. George.

No. 3.

Sir,

I AM directed to transmit to you, for the information of the Honourable the Governor in Council, the accompanying copy of an extract from the proceedings of the Right honourable the Governor-general in Council, in the Foreign Department, No. 749, under date the 24th ultimo, conveying the authority of the Government of India to the disbursement of (3,000) three thousand rupees, for the purpose of repairing the road from Mercara to Veerajenderpett.

Fort William, 4 April 1848.

(signed) *J. Dorin*,  
Secretary to the Government of India.

#### Roads in Teutacarin.

Roads in  
Teutacarin.

EXTRACT Public Works General Letter from Madras, dated 16 Dec. (No. 6) 1850.

Para. 15. REFERRING to para. 2 of our letter in the Revenue Department, dated 7th March 1849, No. 14, we now submit, for the information of your Honourable Court, the further correspondence which has since passed with the Board of Revenue Department of Public Works, on the subject of the formation of roads, &c., to connect the cotton districts with the port of Tutacarin, in the Tinnevely district.

Formation of roads to connect the Cotton district with the Port of Tutacarin; Revenue Cons., 24 April 1849, Nos. 19, 20; Public Cons., 16 April 1850, Nos. 9, 10; Public Diary, 16 July 1850, Nos. 1, 2; Public Cons., 23 July 1850, Nos. 16, 17; Public Diary, 16 August 1850, Nos. 1 to 3; 24 September 1850, Nos. 3, 4; 17 December 1850, Nos. 25, 26.

16. In their letter of the 21st March last, the Board submitted the project of a road from Streevelly-pootoor to Tutacarin, with estimates, amounting, with the modifications and reductions made by them, to Rs. 1,00,463. 2, which it was proposed to disburse from the surplus pagoda funds. This road being one of great importance to the cotton districts through which it is to lead, and referring to the views and opinions already recorded by us on the subject, we sanctioned the proposed outlay; but, considering its large amount, we were of opinion that the civil engineer of the division should be required to visit the work periodically, either in person or through his assistants, and report at least once a month on its progress.

17. The Board subsequently laid before us, with their letter of the 17th June last, a further estimate for the formation of a road through the cotton districts, from Aroopocottah in Madura, to Eltiapooram in Tinnevely, amounting to Rs. 73,304. 13; and for completing the trunk line between Streevelly-pootoor to Shevacansee, amounting to Rs. 16,915. 8.

18. Entertaining no doubt that this road, when completed, would be very useful, and greatly facilitate the cotton trade, to which it is desirable to give every aid, we authorized the undertaking; but as the aggregate amount of the proposed expenditure was Rs. 90,220. 5, and there being only Rs. 55,237. 4. 3. available from the surplus pagoda funds in Tinnevely, set apart under the orders of this Government for works of public utility in that district, we solicited the sanction of the Government of India for the disbursement of the remainder, Rs. 34,983. 0. 9, from the public treasury. In the meantime, we directed that the Tinnevely portion of the Eltiapooram and Aroopocottah line, and the portion of the trunk line between Stravelly-pootoor and Shevacansee, be immediately commenced upon with the aid of the available funds, and that the remainder of the work be deferred until the receipt of the sanction of the Government of India.

19. It is gratifying to us to bring to the notice of your Honourable Court another instance of the liberality of the Zemindar of Eltiapooram, who has undertaken to construct, at an estimated cost of 5,353 rupees, a choultry and bridge at that town, on the new road to Tutacarin.

Roads in  
Tuticorin.

No. 153.

From Sir *H. C. Montgomery*, Bart., Chief Secretary, to *F. J. Halliday*, Esq.,  
Secretary to the Government of India.

Sir,

No. 3.  
Dated 17, 1850,  
No. 503.

I AM directed by the Right honourable the Governor in Council to transmit the accompanying communication from the Board of Revenue on the expenditure required for the formation of a road through the cotton districts, from Aroopocottah in Madura, to Eltiapoorum in Tinnevely, and for completing the trunk line between Streenelly-pootoor and Shevacansee; together with an extract from the Minutes of Consultation of this day's date, containing the views of this Government, and the orders issued on the subject.

2. The aggregate amount of the proposed expenditure is Rs. 90,220. 5, of which Rs. 55,237. 4. 3 being available for the surplus pagoda funds of the Tinnevely district, set apart under the orders of this Government, dated 14th July 1846, No. 733, for works of public utility in that district, I am desired to solicit the sanction of the Government of India for the disbursement of the remainder, Rs. 34,983. 0. 9, from the public treasury.

3. It is necessary to add, for the information of the Supreme Government, that a road, of which this now under consideration will form a branch, is being constructed in the Tinnevely district, at the charge of the pagoda funds; connecting the cotton lands of Tinnevely with the port of Tuticorin. Copy of extract Minutes of Consultation, sanctioning this work, accompanies.

Dated 16 April  
1850, No. 72.

Fort St. George, 7 August 1850.

(signed) *H. C. Montgomery*,  
Chief Secretary.Toongabuddra  
Channel.

## Toongabuddra Channel.

EXTRACT from the Proceedings of the Honourable the President of the Council of India in Council, in the Home Department, under date 17 March 1849.

Revenue Department, No. 209.

No. 46.

From Sir *H. C. Montgomery*, Bart., Secretary to Government, Fort St. George,  
to *F. J. Halliday*, Esq., Officiating Secretary to the Government of India.

Sir,

Para. 1. I AM directed by the Right honourable the Governor in Council to transmit copy of a letter from the Board of Revenue in the Department of Public Works, dated 12th February 1849, with its original enclosures, recommending the disbursement of a sum of 10,000 rupees, for widening the Toongabuddra Channel, in the district of Guntoor.

To Government of  
India, 18 Feb.  
1840, No. 203;  
from Govern-  
ment of India,  
22 June 1840,  
No. 98.  
\* Extract, paras. 18  
to 29, of letter  
dated 11  
May 1848.

2. It will be in the recollection of the Government of India, that the improvement of the Toongabuddra Channel was undertaken under the sanction conveyed in your letter of the 22d June 1840, for an estimate for Rs. 33,882. 8. 10, and the Governor in Council now requests you will draw the attention of that Government to the accompanying extract\* from a report furnished during the past year by the Board of Revenue in the Department of Public Works, showing the great advantages already derived from this important work, and to the fact therein communicated of the channel having paid for itself in two years.

3. The proposition now submitted is to widen this channel, in order more effectually to secure the supply of the high level tanks under it, the sum estimated for that purpose is 10,000 rupees, which the Board of Revenue consider will be quickly repaid, and the Governor in Council entertaining no doubts of the additional work being highly desirable, has sanctioned the disbursement, subject to the confirmation of the Government of India, which he now requests.

4. The original papers now transmitted it is requested may be returned when no longer required.

Fort St. George,  
27 February 1849.I have, &c.  
(signed) *H. C. Montgomery*,  
Secretary to Government.

Home Department, No. 202.

From *W. Grey, Esq.*, Under Secretary to the Government of India, to *Sir H. C. Montgomery, Bart.*, Secretary to Government, Fort St. George.

Toongabuddra  
Channel.  
No. 50.

Sir,

I AM directed to acknowledge the receipt of your letter, No. 209, dated the 27th ultimo, with enclosures, and in reply to state that the President in Council confirms the sanction granted by the Right honourable the Governor in Council, for the disbursement of a sum of 10,000 rupees for widening the Toongabuddra Channel, in the district of Guntoor. The original papers are returned.

Fort William,  
17 March 1849.

I have, &c.  
(signed) *W. Grey,*  
Under Secretary to the Government of India.

Cochrane's Canal.

Cochrane's Canal.

Public Works Department, 24 January (No. 2) 1849.

To the Honourable the Court of Directors of the East India Company.

Honourable Sirs,

Para. 1. FROM the papers transmitted with para. 3 of our letter in this department, dated 17th May 1847, No. 3, your Honourable Court will have learnt that we had under our consideration the condition of Cochrane's Canal, which had then become the exclusive property of Government, as well as the expediency of adopting measures for its improvement, in connexion with the general communication along the Katapully Canal and the Pulicat Lake to Sooloorpet, and that we had called for a survey sketch plan of the soundings, estimates, and all other information necessary for early operations being commenced upon.

From Hon. Court,  
22 July 1846, No.  
17, para. 32; to  
Hon. Court, 17  
May 1847, No. 3,  
para. 2 to 4; to  
Hon. Court, 13  
March 1848, No. 4,  
para. 19; from  
Hon. Court, 31  
May 1848, No. 12,  
para. 13.

2. These documents were received and considered in extract Minutes of Consultation, 24th October 1846, when it appeared that a large portion of the work could be performed by dredging, and that for the remainder an outlay of Rs. 22,047 7 9. would be sufficient. It was our intention to have strongly recommended this disbursement to your Honourable Court, but for the receipt of your public despatch, dated 22 July 1846, wherein you desired that the project submitted in 1822 by Colonel D. Havilland for opening a line of navigation at Doogarauzepatam should be reconsidered, which, as it embraced the extension of the canal, necessarily interfered with that intention.

3. We observe, however, from para. 13 of your despatch in the Public Department, dated 31st May 1848, No. 12, that your Honourable Court, noticing our proceedings of the 24th October 1846, have approved of the measures proposed for improving the water communication to Sooloorpet, under the erroneous impression that we had already sanctioned them.

4. We now submit for your favourable consideration, in connexion with those already before your Honourable Court, a Report, by Captain De Butts, civil engineer of the Second Division, upon the project revived in your despatch of the 22d July 1846, of extending the water communication to Doogarauzepatam. Your Honourable Court will be glad to observe, that Captain De Butts has no hesitation in affirming that there are no difficulties to be apprehended in the execution of such a project; that the work is simple and easy, and that the cost of cutting a canal from Ummencovil to Doogarauzepatam, a distance of 22 miles, 10 yards broad, by three feet wide, would not exceed 25,000 rupees. The only doubt entertained by Captain De Butts is, whether the work will prove remunerative; but upon this subject we refer you to our views recorded on a review of the project in extract Minutes of Consultation, dated 23d January 1849.

Diary to Cons.,  
24 Jan. 1849,  
Nos. 13 to 15.

5. The present project is distinct from that which has already been laid before your Honourable Court, and the entire cost may be laid down as follows:

	Rs.	a.	p.
Improving communication from Madras to Sooloorpett	22,047	7	9
Cutting canal from Ummencovil to Doogarauzepatam	25,000	-	-
	Rs. 47,047	7	9

Cochrane's Canal.

6. Under the present exigencies of the State, we are unwilling to recommend any expenditure not absolutely necessary, but regarding the inland navigation by this line as of importance to the traffic and revenue, and of great convenience to travellers and others proceeding to Madras from the northern districts, and bearing in mind that of the sum of four lacs annually left at our disposal for the improvement of the internal communication, the actual disbursement has hitherto greatly fallen short of it, we feel no hesitation in recommending the execution of this work, too long neglected.

7. We request, in the first place, your early sanction to the estimate for Rs. 22,047. 7. 9, required for improving the communication to Sooloorpet; and secondly, that you will permit us to expend the further sum of 25,000 rupees for extending the canal to Doorgarazepatam, when the estimates for that purpose promised by the Board of Revenue shall have been duly received and considered by us.

We have, &c.  
(signed) *Henry Pottinger.*  
*G. H. Berkeley.*  
*D. Elliott.*

Fort St. George, 24 January 1849.

EXTRACT Revenue General Letter from Madras, dated 6 June (No. 30) 1850.

PARA. 10. WITH reference to our despatch in the department of Public Works, dated 24th January 1849, No. 2, we transmit copy of a correspondence\* which has taken place on the subject of the dredge to be employed upon Cochrane's Canal, and the proposed improvement and extension of that canal. It will be seen from the papers recorded on our Consultation of the 9th October last, that in consequence of a communication we received from the Government of India, we have addressed that Government, and requested their sanction for the amount of the estimates submitted by the Board of Revenue; viz. Rs. 22,047. 7. 9, for cutting bends and improving the communication to Pulicat and Sooloorpett, and Rs. 47,274. 15. for extending the canal to the Backwater at Doogoorazepatam, under the orders of your Honourable Court, making the aggregate expenditure Rs. 69,322. 6. 9.

Public Despatch,  
22 July, No. 17,  
p. 32; 31 May,  
No. 12, p. 13.

EXTRACT Revenue Letter from Madras, dated 4 July (No. 33) 1851.

Cons., 1 July 1851.

PARA. 1. IN continuation of the correspondence referred to in para. 10 of our letter in this department, dated 6th June 1850, No. 30, we have the honour to submit for the information of your Honourable Court certain propositions made by a Mr. Presgrave for improving Cochrane's Canal and the revenue from it, together with copy of a Memo. recorded by our President, and concurred in by the members of Government, and an extract from the Minutes of Consultation, containing a brief review of past proceedings connected with the subject, and of the orders we have issued in disposal of Mr. Presgrave's communication.

2. Your Honourable Court will observe that we have declined to entertain Mr. Presgrave's first proposition to build an iron boat, as unsuited to the present condition and prospects of the canal, and that we have likewise refused our consent to his application for a lease of the canal, holding the opinion that all such sources of revenue should be solely under the management of Government and their officers; the remaining propositions relate "to the charge of the canal on monthly remuneration," or "to its maintenance in repair at a certain sum," and have been referred for the consideration of the Board of Revenue.

3. The condition of the canal is not as it should be, and we see no prospect of much improvement being effected by the temporary means adopted by the Board of Revenue and Collector of Madras, as the exigencies arise, unless the more important work which we have long had in contemplation for the extension and more general improvement of this communication throughout its whole range,  
is

\* Dredge for Cochrane's Canal, and extension of the canal to Doogoorazepatam: Cons., 27 March 1849, Nos. 37, 38; 1 May 1849, Nos. 31, 32; 8 May 1849, Nos. 43, 44; 29 May 1849, Nos. 22, 23; 5 June 1849, Nos. 49, 50; 3 July 1849, Nos. 10, 11; 31 July 1849, Nos. 13, 14; Public Works, 8 May 1849, Nos. 9, 10; Revenue, 9 October 1849, Nos. 16 to 18.

is fully carried out. Estimates for this purpose, amounting to Rs. 69,322. 6. 9, were submitted for the sanction of the Government of India on the 5th October 1849, and by them forwarded for the consideration of your Honourable Court. As, however, a long period has since elapsed without any orders having been received, and as it is desirable that the communication should no longer be allowed to continue unimproved, we beg to draw your attention to the subject, and solicit your early orders for the disbursement required for the contemplated work.

Cochrane's Canal,  
Diary, 15 October  
1850, Nos. 8, 9.

EXTRACT Revenue Letter from Madras, dated 3 June (No. 25) 1852.

1. IN para. 10 of our despatch, dated 6th June 1850, No. 30, in this department, we informed your Honourable Court that we had addressed the Government of India, and solicited their sanction to the estimates submitted by the Board of Revenue for improving the communication by Cochrane's Canal to Pulicat and Sooloorpett, and for extending the line of navigation to the Backwater at Doogoorauzapatam, amounting in the aggregate to Rs. 69,322. 6. 9.

2. Having received no reply to this application, we again addressed that Government on the 28th June 1850, but up to the present time we have not been favoured with any communication of their wishes on the subject.

3. Your Honourable Court are aware that we feel great interest in the improvement of this communication, that it has been the subject of anxious consideration for several years past, and that its extension to Doogoorauzapatam has been in a great measure suggested and encouraged by your Honourable Court. We are induced, therefore, in reference to the delay that has already taken place, to submit the further correspondence\* which has passed on the subject, and to solicit your early orders for the execution of this important work.

EXTRACT Fort St. George Public Works Consultation of 8 May 1849.

READ the following letter :—

No. 304.

From *F. J. Halliday*, Esq., Secretary to the Government of India, to *Sir H. C. Montgomery*, Bart., Secretary to Government, Fort St. George.

Sir,

IN the despatch to the Court of Directors, forwarded with your letter, No. 51, dated the 20th February last, the President in Council observes, that an application is made by the Government of Madras for the sanction of the Court to a certain outlay of public money.

No. 9.

2. This appears to his Honour in Council to be a departure from the practice prescribed by the Charter Act of 1834, an observance of which has been repeatedly enforced in the despatches of the Honourable Court. In their Judicial despatch to the Government of India, No. 10, of 1846, the Court, referring to an intimation which had been made by the Government of India, that they would have thought it proper to postpone the construction of a Penitentiary for the town of Madras if a previous reference had been made to them on the subject, observed as follows :

" We consider it desirable as a general rule, that all questions proposed by the subordinate Presidencies, involving an increase of expenditure, should be submitted for your approval;" and still more recently, referring to a correspondence between the Supreme Government and that of Bombay, the Court have again remarked, that, " except in cases of emergency, a reference to us by a subordinate Government to obtain our sanction to a new item of expense should always be preceded by a reference to the Supreme Government."

3. I am

\* Cons., 2 July 1850, Nos. 23 to 24; 3 September 1850, Nos. 3, 4; 17 September 1850, Nos. 28, 29; 15 August 1851, Nos. 67, 68, and 71, 72; 26 August 1851, Nos. 35, 36; 16 December 1851, Nos. 38, 39; 17 February 1852, Nos. 27, 28; 2 March 1852, Nos. 69, 70; 30 Mar. 1852, Nos. 17, 18.

Cochrane's Canal. 3. I am directed to request the attention of the Right honourable the Governor in Council to the subject, in order that a uniform course of referring all questions of increased expense to the Government of India may obtain for the future.

(signed) F. J. Halliday,  
Secretary to the Government of India.

Fort William, 21 April 1849.

No. 10. Ordered, that the foregoing letter be recorded.

No. 951.

No. 18. From Sir H. C. Montgomery, Bart., Secretary to Government, to F. J. Halliday, Esq., Secretary to the Government of India.

Sir,

See below. I AM directed by the Right honourable the Governor in Council to acknowledge the receipt of your letter, dated 31st April 1849, No. 304, and to request that you will submit, for the early and favourable consideration and orders of the Government of India, the correspondence noted in the margin,\* having reference to the improvement of Cochrane's Canal, and its extension under the orders of the Honourable Court of Directors to Doogarauzepatam, the former involving an expenditure of Rs.22,047. 7. 9, and the latter Rs.47,274. 15, making in all Rs.69,322. 6. 9.

2. The Government of India will observe from the correspondence submitted, the anxiety evinced by the local Government for a series of years to improve this communication, which they regard as highly beneficial to the trade and well-being of the country. They entertain confident expectation that the collections from the canal, now averaging 32,000 rupees per annum, will, under the circumstances noticed in extract Minutes of Consultation, dated 23d January 1849, No. 27, be greatly increased, and repay at no distant period the expenditure. This, however, is proposed to be made gradual and divided between the two years required for the execution of the work, and I am, desired strongly to recommend it for the sanction of Government.

3. The original papers accompanying this communication it is requested may be returned when no longer required.

(signed) H. C. Montgomery,  
Secretary to Government.

Fort St. George, 5 October 1849.

EXTRACT Fort St. George Revenue Diary to Consultation, of 15 October 1850.

8 October 1850.—Received the following letter:—

No. 586.

From W. Grey, Esq., Under Secretary to the Government of India, to T. Pycroft, Esq., Secretary to Government, Fort St. George.

Sir,

WITH reference to your letter of the 5th October 1849, No. 951, I am directed by the President in Council to state that the early attention of the Honourable the Court of Directors has been solicited to the measures proposed by the Government of Fort St. George, for the improvement and extension of Cochrane's Canal.

2. The original papers which accompanied your letter above-mentioned are herewith returned.

I have, &c.  
(signed) W. Grey,  
Under Sec. to the Govl. of India.

Fort William, 20 September 1850.

\* Extract Minutes Cons., 9 January 1846, No. 14, with chief engineer's memorandum; from Board of Revenue, 8 June 1846, No. 371, with report and letter; Ditto, 30 July 1846, No. 490; Extract Minutes Cons., 20 October 1846, No. 264; Public Despatch from Honourable Court of Directors, No. 17, 22 July, p. 32; Ditto No. 12, 31 May 1848, p. 13; from Board of Revenue, 7 December 1848, No. 932, with four enclosures; Ditto, 11 January 1849, No. 26, with two enclosures; Extract Minutes of Cons., 23 January 1849, No. 27; from Board of Revenue, 20 August 1849, No. 617, with four enclosures and one plan; Extract Minutes Cons., 5 October 1849, No. 950.

No. 634.

From Sir *H. C. Montgomery*, Bart, Chief Secretary, to *F. J. Halliday*, Esq.,  
Secretary to the Government of India.

Cochrane's Canal.

Sir,

Para. 1. UNDER date the 5th October 1849, this Government forwarded a lengthened correspondence on a proposition to improve and extend the line of communication by Cochrane's Canal to Doogarauzepatam, and adverting to the advantages to the community and to the trade of the country, solicited sanction for a disbursement of Rs. 69,322. 5. 9. for carrying out that object; but up to the present time the wishes of the Government of India on the subject have not been made known.

2. The Government of India are aware that this Government feel great interest in the improvement of this communication, that it has been the subject of anxious consideration for several years past, and that its extension to Doogarauzepatam has been in a great measure suggested and encouraged by the Honourable Court of Directors; the Right honourable the Governor in Council, in advertence therefore to the delay that has already taken place on the subject, requests that the attention of the Government of India may be called to it, in order that early orders may be obtained for his guidance.

(signed) *H. C. Montgomery*,  
Chief Secretary.

Fort St. George, 28 June 1850.

(True copies.)

(signed) *T. L. Peacock*,

Examiner of India Correspondence.