

EAST AFR. PROT.

7578



Print all

Governor Cont  
16  
Batfield

RAILWAY NAKURU - MACHIGISHU PLATEAU

1914

30th January

Last previous Paper  
Gov  
6459

... cost 2400  
of the survey ... cost 2400  
will be ... 210,000 in 1914 and  
26,000 in 1915. Has approved ...  
GALLET ... staff ...  
staff ... end of June and ...  
staff ...

Mr. G. Zander.

... the maps ...  $\frac{5}{5202}$  ...

I have tabulated with green

... the C.A. with ...  
of the 27th ... that the  
two Dist. Engineers ...  
required to ... the Proj.  
until the ...  
depts. ...  
£10,000 ...  
say that ...  
... what adjustments ...  
to make ...

Asst. Secy to March 1914  
C.A.

Next subsequent Paper

20333

to provide the sum of £2,000 required  
in addition to the present provision, &  
say that it is very arranged that  
the Fort<sup>l</sup> Engineers shall not arrive  
until the end of June?

You will no doubt take an opportunity  
of communicating the substance of  
this despatch to Mr Lloyd

H. J. R.

3<sup>rd</sup> July 14

I think there is no reason why I should let  
him see the whole of this when he calls  
again - 18 hrs. seems a long time for the  
Survey, unless explained.

Prs. 3. 3. 14

Survey & taking out & taking out all  
guaranties is a long job

above Ch. 3. 3. 14

7578

7578

~~WEST AFRICA PROVERBIAL~~

~~CONFIDENTIAL No. 26~~

RECS  
GOVERNMENT HOUSE,  
NAIROBI.  
BRITISH EAST AFRICA.

28 FEB 14



30th January 1914.

1216

Sir,

In continuation of my Confidential despatch of January 6th, 1914, regarding the survey and construction of a branch line of railway from Nakuru to the Usain Gishu Plateau and the North Kavirondo country, I have the honour to transmit for your information copy of a further communication from the General Manager covering copy of a Memorandum by Mr Church, Chief Engineer, on the subject of the survey, together with an estimate of the cost.

2. The sum of £400, which is probably all that can be spent on preliminary survey during the remainder of the current financial year, can be met from savings, but you will observe that the further expenditure necessary is calculated at £10,000 in the forthcoming year and £6,000 in 1915-16. As a sum of £3,000 only has been provided in respect of this work in the draft Estimates for 1914-15, it will be necessary to find special provision to meet the additional cost.

3.

\* N 3158

THE RIGHT HONOURABLE  
LEWIS HARCOURT, P.C., M.P.,  
SECRETARY OF STATE FOR THE COLONIES,  
DOWNING STREET, LONDON, S.W.

3. I have approved of the engagement of Mr Galley to run the flying survey on the terms mentioned in the General Manager's letter, which are the same as those on which he was employed at Kilindini. I have the highest opinion of this gentleman's capacity and industry, and consider that we are fortunate in having again secured his services.

4. With reference to paragraph 5 of my previous despatch above quoted, you will observe from paragraph 3 of the enclosure hereto that Mr Galley now anticipates that employment of the survey staff will not commence until the end of June next. The date of engagement of the engineers should therefore be arranged accordingly.

*etc*  
I have the honour to be,

Sir,

Your humble, obedient servant,

*Richard B. ...*  
GOVERNOR.

7645

714

901

Copy IN ENCLOSURE  
In Dispatch No. 16 of 30-1-1914

C.O.  
7578  
REC'D  
28 FEB 14

Encl in No

27<sup>th</sup> January 14

No. 39

Sir,

Survey Department  
North Kavirato

In continuation of my letter No. D/11/14 of the 30th December last, I have the honor to forward a memorandum on an estimate for the survey of a railway from Makuru to the North Kavirato District.

3. The estimate has been prepared by Mr. Church who has had much experience in survey work in this country. The total cost £16,000 is higher than was anticipated but any additional sum spent in investigation of the country and its resources before construction will be recouped many times over in savings on capital expenditure. I beg therefore that sanction may be accorded to this estimate.

5. If the staff were ordered at once I do not think we could put them in the field before the end of June and this means we could reckon on only nine months work during 1914-15 and I therefore ask for an allotment of £10,000 for expenditure during the coming year.

4

THE HONOURABLE  
THE CHIEF SECRETARY  
TO THE GOVERNMENT,  
PAIROHI.

4. The Secretary of State has approved of the survey being commenced forthwith if the expenditure can be met from savings this financial year.

I have been fortunate to find Mr. Bailey who only lately left is willing to join us again for two months and I have arranged with him to do a flying survey and to investigate the alternative routes at the Malabar hills.

These alternative routes are detailed in Mr. Church's Memorandum and it is very necessary they be thoroughly investigated as one of the alternatives is much favoured by the farmers of the Soled and Soie Valleys.

5. We shall spend during 1913-14 probably between £500 and £400 and this also can be met from "Works Extraordinary". I propose Mr. Bailey should be paid a salary at the rate of £1,000/- a year as before. It is well worth this. Mr. Bailey sails for home on April 4th so we do not anticipate retaining him a week for over 2 months.

6. The proposal to employ Mr. Bailey has been approved of by His Excellency and the formal sanction may be accorded to the temporary employment for two to three months at a salary at the rate of £1,000/- a year and that sanction be also accorded to an expenditure of £400 on the survey during 1913-14 against "Works Extraordinary".

I have the honor to be,

Sir,

Your obedient servant,

~~W. B. LAYTON~~

General Manager,

Uzamba Railway.

MEMORANDUM AND ESTIMATE ON THE SURVEY  
OF THE HAKURU MUMIAS LINE

1. The distance according to MacDonald's survey from Hakuru to Mumias is approximately 185 miles.

The only length that there may be any considerable deviation from MacDonald's route is between Hakuru and Mela. Two alternatives will have to be examined

- a. Hakuru to the North of Mwangai about 25 miles
- b. Hjera to the Male direct about 15 miles

The total length of survey to be undertaken will then be some 220.

2. It took me with an Assistant Engineer and for part of the time two Assistant Engineers fifteen months to survey and stake out the line between Mau Summit and Kisumu a distance of roughly 90 miles.

A second party of the same strength took a year to survey and stake out between Hakuru and Mau Summit about 45 miles in length but they had some 25 miles of forest against only ten miles. I do not think therefore that the whole survey between Hakuru and Mumias can be completed with the setting out in much less than eighteen months employing two parties consisting of a District Engineer and Assistant Engineer and necessary staff of surveyors etc.

In my letter No. 6949/3 of the 5th December 1913, I said I thought that it could be done within a year but I had not then realized the length of the survey. I am therefore going to base my estimate of the survey taking 1½ years to complete.

3. The Eldama Bayine seems to be a point where it would be advisable to be so far to the South of the Government Station as possible so as to avoid a heavy viaduct.

Between

Between the Ravine and Molo River the line will in all probability run over the saddle between Londiani and Eldoret at an approximate level of 6400 feet.

I would suggest that this would be the starting point of the two parties. No. 1 party would then survey the large routes to Nakuru and No. 2 party would climb up to South of the Ravine and would probably be well on the plateau by the time No. 1 party had completed the survey to Nakuru etc.

No. 1 party would then proceed to Mumias and survey along MacDonald's route to meet No. 2 party and they should meet somewhere near Eldoret.

4. The maximum grade should be 2.00 and the sharpest curvature 800 feet radius.

If possible I would advocate a  $1\frac{1}{2}\%$  on downward journey, Mumias to Nakuru, it might be practicable.

Where heavy work is likely to occur deviations might be made for temporary lines with sharper curvature and heavier grades and even reversing stations (which I prefer to increased grade and curvature) but the main line must not be sacrificed. Work them in.

I would suggest that sites for stations be established every ten miles taking into account water supplies etc. These station sites should be on the level for at least 1200 feet and on the straight or very easy curvature. Probably stations twenty miles apart will be sufficient for some years but as traffic increases especially on the 2% sections extra stations will be required and it is as well to bear this in mind and make provision for them, as it is difficult to do so afterwards without altering the alignment.

6. There should be no difficulty as regards feed as the Uasin Gishu plateau and Molo flats produce any quantity of maize. A feed store at the Ravine and at Nakuru would be all that is necessary to start with and tracts could be let for the supply of feed at these points.



The maine will have to be ground either by contract or by themselves. Later on a depot could be formed at Eldoret, and another at Mumias. Each party would have to have a sufficient number of men to fetch the food from these depots to the camp.

7. Constitution of each Party

1 District Engineer

1 Assistant Engineer

2 Surveyors

1 Draftsman

1 Clerk

30 Chainmen

160 Porters for bush cutting shifting camp and portorage of food etc from depots

1 Stores Clerk at depot

6 Porters at depot

I have allowed a camp allowance for the superior staff but I think the Subordinates Staff could have consolidated pay.

8. Appended is a detailed estimate of

A. Staff

B. Tents etc

C. Survey instruments

D. Drawing Office Outfit

E. Medical Outfit

F. General Estimate

I have gone into detail as regard equipment of B, C and D as it may be necessary to indent on England for many of the articles.

Camp furniture could be obtained locally and tools plant and perishable stores could be drawn from the General Stores.

The estimate for medical outfit has been prepared by the Principal Medical Officer.

ESTIMATE

Two parties consist of

District Engineer at £700 per annum	for eighteen months	£1050
Camp Allowance at 3.00 per diem		128
Assistant Engineer at £300 per annum		450
Camp Allowance at Rs.3.50 per diem		128
Surveyors at Rs.200 per mensem each		480
Draftsman at Rs.150 per mensem		180
Clerk at Rs.150 per mensem		180
Stores Clerk at Rs.150 per mensem		180
Porters at Rs.10 per mensem		1800
Chairmen at Rs.15/- per mensem		540
Native Artizans at Rs.30/- per mensem each		<u>108</u>
		5224
		say <u>£5250</u>

Tents etc for each party

Officers tents at £20 each	£80	
Subordinates Tents at £10 each	£40	
Bush Tents at £4.10 each	£72	
Porters Tents at 48h. each	£120	150 porters would use 4 each in 18 months
Depot Stores at £50 each	£100	
Ground Sheets at 25/- sh. each	<u>£ 25</u>	
	£437	say £440

Instruments for each party

Theodolites at	£30	£90	
Levels at	£ 8	£32	
Aneroid Barometers	£ 8	£16	
Abney Levels	£ 2	£ 4	
Cross Staffs	£ 30	£ 4.10	
Prismatic Compasses	£ 3	£ 6	
steel bands 100 feet	£ 1	£ 1	
steel tapes 50 feet	£ 0.15	£ 1.10	
Level Staffs 14 feet	£ 1	£18	
Ranging Rods 6 feet	£ 0.2/6	£ 6	
Survey Umbrellas	£ 1	£ 6	£188 say £200

<u>Drawing Instruments and Materials</u>	<u>No.</u>	<u>Rate</u>	<u>£</u>	<u>S</u>	<u>D.</u>
Boxes drawing instruments	2	5.10.0	11	0	0
Drawing Boards on Trestles	2	2.11.6	5	5	0
Box curves 1" radius	1	3. 0.0	5	0	0
Box curves for degrees 400 ft 1 inch	1	5 0.0	5	0	0
Box of Architect Scales	1	17.0	17	0	
Box of Ordnance Scales	1	19.0	19	0	
Boxes 10 - 20 feet Scales	2	1.10.0	3.	0	0
Spare 400 1 inch Scales & 6 Effects	12	2.5	1	10	0
30' parallel rulers	2	4.15.0	9	10	0
30' steel straight edge	2	10.0	1	10	0
9" Protractors	2	2.10.0	5	0	0
Butts Engineering Field Book	2	15.0	1	10	0
Searies Engineering Field Book	2	15.0	1	10	0
Chambers Tables	2	4.0	0	0	
Colour Box	1	15.0	15	0	
	2	3.0			
sets squares 2 large & small 60° & 45°	2	2.0			
	2	1.0		17	0
	2	1.0			
Set Slopes and Batters	1	6.0	6	0	
Seven paper weights in leather	12	2.3	1	7	0
Seven colour saucers	set	1.0			
Reels 4 des H, 4 des M, 4 des 4H 5 des HB	20	3.6	5.	10	0
Reels section paper 40" - 1"	10	5.0	2	10	0
Reels tracing paper	20	7.6	7	10	0
Reels tracing cloth	10	1. 6.6	13	5	0
Reels mounted drawing paper	20	1 6.0	26	0	0
Reels Cartridge paper	5	10.6	2	12	6
Seven Field Books	des	19.0	5	14	0
Seven Loose Books	des	1. 1.0	6	6	0
Seven sticks Indian Ink	pack	5.0	6	0	0
Seven sticks Prussian blue	"	9		18	0
Seven sticks Red	"	9		18	0

Carried forward

222 14 6

	No.	Rate	£	S	D
Brought forward			128	14	6
2 pair magnifying glasses	set	5.0		10	0
1 doz water colour brushes	each	6		6	0
1 stencil brushes	"	1.0		3	0
1 dozen plan cases	"	10.0		6	0
6 dozen ink and pencil erasers	doz	5.0		1	10
2 erasing knives	each	1.0		2	0
3 dozen India rubbers	"	8		1	4
1 set stencils	set	2.0		0	0
2 Oil Stones Small	2	3.0		7	0
Stencil ink 1 dozen	each	1.0		6	0
			241	2	6
<u>Add 10% for freight rail charges and packing and contingencies</u>			14	8	3
			255	4	9

Buy £160 each party.

Camp Medical Outfit

		Rs.
<b>Personnel</b>		
Assistant Surgeons	1 each 2 @ Rs.275 P.M.	9900
Travelling Allowance	2.50 each per diem	1100
Dressers	2 each 4 @ Rs.12/- p.m. each	864
<b>Camp Equipment</b>		
Medical Officer's Tent	2 (1 per A.S.)	500
		840
Bush Tents	6 (3 each for H use)	222
Bush Tents	2 (1 each for boys & Dressers)	380
Bush Tents	2 (1 each for Dispensary and Stores)	280
Camp Tables	2 (1 each A.S.)	40
Camp Tables	2 (1 each Dispensary)	40
Camp Chairs	2 (1 each A.S.)	15
Camp Chairs	4 (1 each Dispensary)	15
Camp Beds complete	2 (1 each A.S.)	60
Camp Beds complete	24 (12 each Hospital)	720
Mosquito Curtains	2 (1 each A.S.)	30
<b>General Equipment</b>		
Blankets	100 (50 each Hospital)	100
Lanterns Hurricane	12 (6 each Hospital)	48
Supply of oil, wick and spare globes	say	50
Buckets G.I.	6 (3 each Hospital)	12
Basins Wash-hand Enamel	4 (2 each Hospital)	8
Enamel Plates	24 (12 each Hospital)	8
Enamel Mugs	24 (12 each Hospital)	8
Enamel Spoons	24 (12 each Hospital)	6
Knives	24 (12 each Hospital)	18
<b>Water Purification</b>		
Griffiths Sterilizers	2 (1 each Camp)	900
or		
Deulton's Filter	4 gallons 2 (1 each hex.)	
	Rs.33/ each	50
* would not serve the whole camp		

	Brought forward	£.	S	D
Medical and Surgical Equipment	1059	0	0	
Paniers 1 & 2 2 yrs ( 1 each H.P.)	120	0	0	
Pocket Instr. 2 cases ( 1 each H.P.)	7	3	0	
Amputation Stretchers 2 ( 1 each H.P.)	6	0	0	
Yank Needls: 100 lbs ( 20 each H.P.)	5	0	0	
Lint Darts 100 lbs ( 50 each H.P.)	6	6	8	
Lint Plain 100 lbs ( 50 each H.P.)	7	10	0	
American for bandages 20 pieces 6/50 per piece (10 each H.P.)	2	13	4	
Gauze bandages 288 (144 each H.P.)	1	14	0	
Field Tarpaulin box 2 ( 1 each H.P.)	19	12	0	
Woods Syringes 2 ( 1 each H.P.)		8	0	

Additional Drugs as to contents of Paniers

Caster oil 20 lbs (10 lbs each H.P.)		10	0	
Nyctem Salts 64 lbs ( 28 lbs each H.P.)		9	0	
Chlorodyne 2 lbs ( 2 each 1 lb. each H.P.)		9	0	
Carbolic Acid 10 lbs ( 5 lbs H.P.)		10	0	
Salsid's Carres 200 1000 ( 500 each H.P.)		13	4	
Tabl. Colman 1000 ( 500 each H.P.)		7	6	
" Cassara 600 (300 each H.P.)		7	0	
" Quin Bisulph 3000 ( 1500 each H.P.)	2	0	0	
" Dover's Powder 1000 ( 500 each H.P.)		11	8	
" Phenacetin 1000 ( 500 each H.P.)		11	8	
" Sodi Salicyl 1000 ( 500 each H.P.)	1	0	0	
Measures glass ( 2 each H.P.)		2	8	
" Enamel 1 pint 2 ( 1 each H.P.)			0	
Coferant 10 gals ( 5 gals each H.P.)	2		0	

---

1255 10

Say £.1300

General Estimate

A. Staff		
2 Parties as per detailed estimate A at £2500	£10,000	
B. Tools etc		
2 Parties as per detailed estimate B at £440	£ 880	
C. Field Instruments etc		
2 Parties as per detailed estimate C at £200	£ 400	
D. Dressing Outfit		
2 Parties as per detailed estimate D at £100	£ 200	
E. Medical Outfit		
2 parties as per detailed estimate E	£ 1,500	
Camp Furniture for 2 parties at £150	£ 300	
Tools and Plant for 2 parties at £200	£ 400	
Perishable Stores etc for 2 parties at £200	<u>£ 400</u>	
	£14,000	
Contingencies	£ 1,100	£15,100

Contingencies will cover extra dressing staff in the Chief Engineer's Office, extra work in the Chief Accountant's Office and unforeseen expenditure.

The original survey of the Uganda Railway cost £125 per mile. This works out at about £71 per mile.

*W. C. ...*  
 Chief Engineer,  
 Uganda Railway Nairobi.

January 1914.

Govt 7578/1914 1214



755

March 1914

Sir,

DRAFT

E.A.P.

*Confidential*

for Sir H. Belfield

MINUTE

Mr. Kasper 4/3/14

Mr. Bottomley 4/2/14

Sir G. Fiddes 4

Sir H. Just.

Sir J. Anderson.

Lord Emmott.

Mr. Harcourt.

I have the honour to acknowledge the receipt of your *Confidential* despatch, No. 16, of the 30 of January, and to inform you that I approve of the expenditure of £10,000 during the year 1914-15 on the survey of a branch line of Railway from ~~Nakuru~~ <sup>Nasin</sup> Nakuru to the ~~Green~~ <sup>Green</sup> Gishu Plateau and the North Kavirondo country. You will, no doubt, indicate in due course what

SAR  
make copy of report to be  
sent to Mr. G. Fiddes  
✓

\* 1. 7578

dfts

PED



adjustments you propose  
to make in the Estimates  
in order to provide  
the sum of £7,000  
required in addition  
to the present provision.

The fr. Agents for  
the fols. have been  
informed that the services of four  
temporary Engineers will  
be required to arrive  
in the Prov<sup>t</sup> until the  
end of June

7578

Gov 7578/1904 E.A.P.

756

1215

DRAFT.

The fr. Agents

(L)  
(25/3)

MINUTE

Mr. Harpur 4/10

Mr. Bottomley 12

Sir W. Fiddes 4

Sir H. Jones 8

Sir J. Anderson 2

Lord Emboott

Mr. Harcourt

Mr. Reed  
The fr. Agents for  
the holding of all four  
4/10 - 2 Districts & 2  
Co. Engineers. Found  
themselves right.

Ord

4/10

2/10

\* No 6459

+ 1 7578

4 March

Gentlemen,

With reference to the letter  
from the Office of the 27<sup>th</sup>  
Feb<sup>y</sup>, in connection  
with a despatch  
requesting you to engage  
two District Engineers &  
two Assistant Engineers for  
temporary service with the  
Uganda Rly staff, I  
am to inform you  
that a despatch has been  
received from the Gov<sup>t</sup>  
of the E.A.P. stating that  
these officers will not be  
required to arrive in  
the

**PUBLIC RECORD OFFICE**

**CO/533/132**

**END**

**TOTAL EXPOSURES →**

**PUBLIC RECORD OFFICE**

**CO/533/132**

**END**

**TOTAL EXPOSURES →**

# PUBLIC RECORD OFFICE

CO/533/133

ORDER NO.           ⇒162  
CAMERA NO.         ⇒23  
OPERATOR.           ⇒JV  
REDUCTION.         ⇒12  
EMULSION NO.      ⇒292011  
DATE.                ⇒30/7/70

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# PUBLIC RECORD OFFICE

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REPRODUCED IN ENTIRETY

# East Africa Protectorate

1914

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