

1923

16

KENYA

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36664

REC  
RE 23 JUL

53

FROM

C. A. G. Bevington 1043

DATE

24 July 1923

OR CIRCULATION :-

SUBJECT

Mr.

Mr.

Mr.

Asst. U.S. of S.

Si H. Kead

14/9/23

Perm. U.S. of S.

Perm. U.S. of S.

Secretary of State.

Railway Construction  
Use of Local Timber Sleepers

Reviews history of negotiations with Equator Saw Mills & confirms tel. of 10th April stating that use of local timber sleepers is impracticable.

Previous Paper

800

34191

MINUTES

I send the duplicate to Si R. Corydon on July 24<sup>th</sup>. He returned it on the 8<sup>th</sup> saying that he had no comment - the matter was settled as regards the main line. By the Kitch branch is very hard in the rain. He had discussed with local Rhodes. That with the matter so far as Si R. Corydon's own intervention in 18270 is concerned.

As regards the duplicate of 1913, there is not much to be done in this case. To get a better idea of the matter we had written before.

Subsequent Paper

is that we wanted,  
 though I will find nothing  
 to show that  $\leq 5.44$ . (This  
 on the only case, the plant)  
 could change for monetary  
 relations with the by another  
 firm.

As regards (1) & (2) of  
 Mr. Robertson's tabular  
 statement of his questions  
 & his answers -

1. ~~As~~ the  $\leq 5.44$  is done,  
 because  $3\%$  is an overestimate,  
 the rule of conservation of  
 $3\%$  has (d) answers, ~~and~~  
 the production costs  
 will be as part of the  
 delayed day and of interest.  
 I should be glad to see  
 the change at  $5.44$ .  
 rather than  $7.12\%$ , but  
 at all times, i.e. now  
 think that has been  
 by the  $10\%$ .

2. The expression is  
 not in the table present  
 that  $(1+x)^n = 1.447$ , a  
 roughness of approximation

which offers me for the  
 particular case of the pod: versus  
 $4.10\%$   
 steel, it seems to give a good  
 answer 60  
 to be used in future  
 for the next conclusion of the  
 generation & energy

?/body -

Cal.  
 11823

f. m. l.

g. h. t.

2. 3. 3.

KENYA.

NO. 1043.



61  
GOVERNMENT HOUSE,  
~~Mombasa~~ Mombasa,  
KENYA.

39804

4th July, 1923.

10  
23 JUL 23

My Lord Duke,

With reference to Your Grace's despatch No.324 of March 1st, I have the honour to refer to my telegram No.111 of April 10th to the effect that on the advice of railway experts in this Colony, namely the General Manager, Uganda Railway, the Chief Engineer, Uganda Railway and the Chief Engineer, Construction and Survey of Railways, I came, with reluctance, to the conclusion that the possibility of using wooden sleepers on the Plateau Line as far as Turbo must be abandoned.

A memorandum (enclosure A) by Colonel Robertson replying in detail to the questions raised in the despatch under reference is forwarded for Your Grace's information and I propose to give a detailed history of the events connected with the contract for wooden sleepers with Equator Saw Mills, Limited.

The relative merits of steel and wooden sleepers formed the subject of considerable discussion during the early months of 1922 and Government finally approved a resolution of the Economic and Financial Committee that local timber sleepers should be used for future railway construction, if available in sufficient quantity at an economic price.enders were accordingly invited

HIS GRACE

THE DUKE OF DEVONSHIRE, K.G., P.C., &c., &c.,  
SECRETARY OF STATE FOR THE COLONIES,  
DOWNING STREET,  
LONDON, S.W.

62  
invited for the supply of 83,000 wooden sleepers, which should comply with certain specifications. I enclose for Your Grace's information copies of the original notice inviting tenders, (enclosure B), and of the specification conditions which were open to inspection by the tendering firms, (enclosure C). On the assumption that these conditions would be fulfilled the tender submitted by Equator Saw Mills Limited, was provisionally accepted on 9th January on the terms shown in the attached letter, (enclosure D), from Griffiths and Company to the Company. Acting on this belief, Colonel Robertson informed Sir Robert Coryndon that the tender would be accepted. On February 27th 1923, at a meeting an account of which is given in the enclosed letter from the Chief Engineer Construction and Survey of Railways (enclosure E) Messrs. Equator Saw Mills Limited declared their inability to supply sleepers to comply with the specifications as to thickness and seasoning, and also that they were unable to deliver the sleepers on the dates required by Messrs Griffiths and Company. This announcement by the Company necessitated the withdrawal of the provisional acceptance of the tender and led to a reconsideration of the whole question with the result stated in my telegram of April 10th, No. 111, the reasons for which decision I propose to mention briefly.

4. In the first place the time factor rendered the proposal a physical impossibility for the plateau line. Leaving aside the question of moisture content, local expert opinion held that a six months seasoning period was the minimum that could be allowed for air drying purposes during the rainy season. This interval, added to the shortest possible period for cutting and stacking would have

meant that construction would have been held up for lack of sleepers. There were other difficulties with regard to the dimensions of the sleepers and penalties for failure to comply with the contract and in this connection I enclose a copy of Colonel Robertson's letter of May 22nd (enclosure F) explaining the rejection of the tender.

5. The second factor influencing the decision was the unanimous opinion of my railway advisers, at the conference referred to, that the risk of using such untried material as 'Podocarpus Gracilior' on a future main line could not be justified. In this connection I would mention that experiments made by the Uganda Railway show that 'Msharagi' is inclined to split and is therefore unsuitable and that, in any case, its distribution put that timber out of court for the purposes in view.

6. The evidence which was communicated under cover of Your Grace's despatch has been accepted by my expert advisers as a reasonable comparison of the lives of steel and local timber sleepers and the original formula submitted by this Government requires revision accordingly, even though the necessity for providing bearing plates with timber sleepers was, throughout, taken into account. This consideration also carried weight in the decision taken.

7. Taking all these arguments together, I had no alternative; the great advantages that would have accrued to the colony by the use of local material and by local employment had to be abandoned and the decision given in favour of the sleeper which had been proved and was acknowledged to be the more economical.

8. I have dealt

880  
18270

I have dealt so far with the question of sleepers for the Uasin Gishu line to Turbo; until the receipt of Your Grace's telegram of May 16th, I had been unaware that Sir Robert Coryndon personally had raised the question of the possibility of entering into a contract with Messrs Equator Saw Mills Limited and of utilising wooden sleepers for the Kitale branch. Your Grace will have observed from paragraph 3 above that the tender for the Plateau line by that Company was only provisionally accepted and that the contract was withdrawn owing to the inability of the tendering firm to comply with the conditions specified at the time that the tenders were invited. It is necessary to point out in this connection that the question of moisture content was included in the original specifications which were open to inspection by the tendering firms before their tenders were submitted, and that this was not a new provision included after the specifications had been advertized. In fact, the original specifications stipulated for 15% moisture content and this figure was amended to 10% in order to render the conditions less arduous, with a view to arriving at an agreement with the Equator Saw Mills Limited. As stated in Sir Robert Coryndon's telegram No. 75 of March 10th, 1923, Colonel Robertson was unable to recommend further modification of the moisture content to exceed 10%. It is only reasonable to assume that any undertaking by Sir Robert Coryndon must have been contingent on full compliance by the tenderers with the specifications governing the invitation for tenders and it is impossible to believe that the firm in question can have understood the Governor's intimation in any other light. This being so, it is clear that the Company annulled the promise by their declaration and I trust that the information now given will suffice to assure Your Grace that no obligation, legal or moral, binds

binds the Government to enter into a new contract for wooden sleepers.

9. As far as the Kitale construction is concerned, the difficulty arising from the time factor does not exist nor is the objection raised in paragraph 5 above of equal importance. From an economic point of view the balance still favours the steel sleepers; nevertheless, the undoubted benefits accruing from an impetus to local industry would form a strong inducement to utilise local timber were it not for the fact that a large amount of second-hand material will be available from the main line as soon as the relaying with 80 lb. rails is undertaken.

10. In view of the fact that no construction of the Kitale line can be possible for a considerable period, and for the further reasons detailed below, no action has been taken as yet to carry out Your Grace's instructions in regard to the confirmation of the contract.

In the first place, no intimation has been received regarding the flotation of the £3,000,000 Loan.

Secondly, the financing of this construction will depend entirely on savings becoming available from the allocations for the Plateau and Thika-Nyeri lines. A cursory inspection by the Chief Engineer, Uganda Railway, of the work done by the contractors on the plateau line revealed that inadequate construction will necessitate expenditure of a portion at least of the savings estimated in my despatch no.941 dated July 12th, 1922, added to which abnormal rains have caused damage which will absorb a further amount of anticipated savings. This leads me to think that a revision of the savings calculated in respect of the construction of the remainder of the line may be necessary.

See  
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necessary. In this connection Colonel Robertson has been asked to furnish a revised estimate for the total construction of Turbo and until this has been received it cannot be assumed for certain that funds will be available for the construction of the Kitale branch.

Thirdly, it is assumed that any contract for wooden sleepers must contain specification conditions which are considered necessary and reasonable by the railway expert advisers. I have therefore considered it advisable that the facts narrated above which reveal all aspects of the case should be submitted to your Grace for discussion with Sir Robert Coryndon before any final action is taken,

11. I may add that local timber sleepers are being used by the Uganda Railway for experimental purposes over short distances and tenders up to 20,000 have been accepted by the Railway administration as under:-

Equator Saw Mills

Creosoted Wode Sleepers

Type No. 1	5000 @ Shs. 8/50 each
" " 2	1000 @ Shs. 12/22 "
" " 3	1000 @ Shs. 13/96 "
" " 4	2000 @ Shs. 15/69 "

B.E.A. Saw Mills

Camphor Sleepers

Type No. 1	5000 @ Shs. 8/- each
" " 4	1000 @ Shs. 15/- "
" " 5	1000 @ Shs. 16/66 "
" " 6	1000 @ Shs. 18/40 "
" " 7	2000 @ Shs. 28/80 "

Kambala Estates

Cedar Sleepers

Type No. 1	1000 @ Shs. 8/50 each
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Contracts for Mvuli Wood Bridge timbers are being placed in Uganda.

It is to be assumed

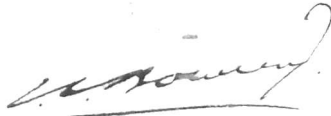


It is to be assumed that the statement in "African Industries" quoted by Your Grace was based on the assumption that the invitation for 83,000 shares for the Turbo line would be fulfilled.

I have the honour to be,

My Lord Duke,

Your Grace's most devoted and  
most obedient servant,



ACTING GOVERNOR.

March 30th 1923

The Hon. Colonial Secretary,  
The Secretariat,  
Nairobi.

Sir,

Timber Sleepers  
Your ref. S. 6728/60 of 23.3.23

I have the honour to acknowledge the receipt of your above quoted letter, and, in compliance with the instructions conveyed therein, have given careful attention to the subject matter of Colonial Office Despatch No. 524 of the 1st March with enclosures, and now submit for your consideration the following comments, which, together with the attached memorandum will, I trust, supply the information upon which a reply may be made.

2. I observe from paragraph 2. of Colonial Office Despatch that some difficulty has been experienced in understanding the precise nature of the investigations and recommendations made by the local committee, and that for the purpose of obtaining further information on the investigations and recommendations of the Committee a memorandum embodying certain questions to which replies are desired is attached to the Despatch.

To the questions embodied in this memorandum I have replied seriatim in the attached memorandum.

3. With reference to paragraph 3. of the Despatch the inherent advantages realised from the use of a steel sleeper as against a timber sleeper have never been disputed. The question resolves itself into a consideration of the relative values of steel and timber sleepers with the object of forming an opinion as to the expediency, or otherwise, of purchasing local

local timber sleepers with the object of supporting local industry during a period of acute depression, and also of endeavouring to induce an export trade in sleepers.

4. The statements appearing in "African Industries" to which reference is made in paragraph 4. is probably based upon the appearance in the local press of advertisements inviting the submission of tenders for the supply of 83,000 timber sleepers for the Uasin Gishu Railway, and 20,000 for the Uganda Railway.

In reply to the advertisements tenders were received from five timber concerns for the supply of sleepers to the Uasin Gishu Railway. On the 9th January the tender of Messrs The Equator Saw Mills Ltd., Nairobi, was provisionally accepted, pending agreement as to conditions regulating and defining time of delivery, inspection and payment.

The negotiations between Messrs E.S.M.Ltd., Messrs Griffiths & Co.Ltd., and the Chief Engineer continued up to the 27th February when the representative of Messrs E.S.M.Ltd., declared his inability to accept the conditions as to delivery, penalty for failure to fulfil the contract, supply of a sleeper to standard size and to produce evidence that the sleepers were satisfactorily seasoned previous to being creosoted. The provisional acceptance of the tender was therefore withdrawn on the 27th February and on the 2nd March, under this office letter No.81/3/1019 His Excellency's sanction was requested to purchase in England the number of steel sleepers required to complete the Railway.

The position therefore is that no sleepers, timber or steel, have been ordered for this Railway since the 9th November, 1922; the date of your Despatch No. 1543.

5. To insure continuous progress of the Railw

and avoid delays, further orders for sleepers should be placed now, and I trust that I will obtain His Excellency's sanction to do so at an early date.

6. As you are aware a considerable number of sleepers consisting of a variety of timbers will shortly become available on this Railway. These sleepers are obtained by milling the trees felled while clearing the forests for the construction of the Usin Gishu Railway.

The experiment recommended by Colonel Hammond could be given effect to on the construction of some Railway to be completed in the future, utilizing the wooden sleepers available from this Railway when reasonably seasoned and treated, if necessary.

7. Passing to the consideration of Colonel Hammond's letter, dated 21st February; I am of opinion that a large supply of M'sharagi is not available. The trees grow widely apart, and are not in any great numbers; their recovery is therefore expensive, and the supply limited. I have inspected a sample of M'sharagi creosoted. The impregnation was poor and splitting, - to which M'sharagi is very prone, - did not seem to be arrested by the preservative process to which the timber had been subjected.

8. The prices paid on this Railway for a M'sharagi sleeper 11" x 4" x 4½" was Shgs. 6/6, uncreosoted.

Among the hardwood timber of Kenya probably Gampor wood and Muna would be available in larger quantities than M'sharagi. The prices at which these sleepers have been offered to this Railway are Shgs. 11/- and 8/- each, respectively, F.O.R. Uganda Railway. The sleepers are not creosoted.

9. The only authority regarding the life of

a creosoted Podocarpus sleeper in South Africa, to which I am able to refer Colonel Hammond, is contained in para. 3. of letter No. F/1236, R 5142/13, dated Pretoria, April 4th, 1922 from the Officer-in-Charge, Timber Investigation to the Conservator of Forests, Kenya Colony, in which it is stated, in discussing Podocarpus sleepers that:-

"The untreated wood decays very quickly in contact with soil, but sleepers that have been creosoted under pressure have a life of approximately 15. years, depending on the amount of creosote injected and the locality in which it is used."

10. It was the intention to use bearing plates with a Podocarpus sleeper, and, as will be observed from inspection of the attached statement showing the cost of sleepers, the cost of bearing plates was provided for in the estimates.

11. A point which has not been commented upon in the correspondence, and perhaps has not so far been considered, is that the cost of a steel sleeper includes Shgs. 2/7 paid to the Government Railway for freight. Deducting this charge the cost of a steel sleeper is Shgs. 10/7½ as against the cost of Shgs. 11/10½ of a creosoted podocarpus sleeper, including two bearing plates.

12. attached are statements showing in detail the cost of

- (a) a steel sleeper with two keys.
- (b) Creosoted Podocarpus sleeper with two bearing plates and eight dog spikes.
- (c) Untreated M'sharag sleeper without bearing plates.

13. The formula referred to in the correspondence, and from which is calculated the statement of comparative values of sleepers, is given in paragraph 2. of the attached memorandum.

14. From calculations based upon this formula it emerges that, if the life of a steel sleeper be taken at 30 years, and the first cost is Shgs.13/2 $\frac{1}{2}$ , and the life of a creosoted Podocarpus sleeper, with two bearing plates is ten years, and the rate of interest payable is 7.5% per annum, then, the comparative cost of the Podocarpus sleeper, - in terms of the cost of the steel sleeper - is Shgs.9/11 $\frac{1}{2}$ ; and as the cost of a creosoted Podocarpus sleeper with two bearing plates is Shgs.11/10 $\frac{1}{2}$ , its use is not economical; the difference in favour of a steel sleeper being Shgs.-/11 $\frac{1}{2}$ .

I have etc, etc.,

Sd/- J.K. Robertson  
Chief Engineer,  
CONSTRUCTION & SURVEY OF RAILWAYS.



Statement Showing:-

COST OF A CREOSOTED PODOCARPUS SLEEPER.

With two Bearing Plates & eight Dog Spikes - delivered at Maji Mazuri Station, Uasin Gishu Railway.

	Shs.
Cost of Sleeper, uncreosoted	6. 0
do do Creosoting	2. 6
do do Steel Bearing Plates 5.9 lbs } each delivered at Nakuru }	2. 8.25
do do Dog Spikes each .672 lbs } delivered at Nakuru }	7.
Boring Sleepers	1. 2
	<hr/>
	11.10.45
	<hr/>
Say Shs.	11.10½
	<hr/> <hr/>

Statement Showing:-

COST OF M'SHARAGI SLEEPER 3' x 9" x 4½".  
AND NOT CREOSOTED WITHOUT BEARING PLATES.

	Shs. d
Delivered at Nakuru from Maji Mazuri Station on the Uasin Gishu Railway	6. 5
	<hr/>

The above price is taken from invoice dated 1st November, 1922 from Messrs Equator Saw Mills Ltd., Nairobi, to Messrs Griffiths & Co. Ltd.,



Questions contained in Memorandum accompanying the Secretary of State's despatch No. Kenya 324 of 1. 3. 23.

Replies by Chief Engineer.

1. In the Committee's statement of the factors for estimating equivalent values, it is stated that the interest factor, with loan money at 6% may be assumed at 10%

This is not understood.

2. In the Committee's statement of relative values, figures (under three headings) are given, which in some cases extend to several lines.

The meaning of the figures in the different lines is not understood.

1. The factor of 10% on which is based the calculations estimating relative values of sleepers is arrived at as follows:-

- (a) Interest payable on Loan..... 6 per cent
- (b) Annual payment to a sinking fund to redeem capital after 40 years at 3% per annum..... 1.33 " "
- (c) Cost of issue requires an annual payment by the portion of the loan invested in Productive Works of .73% per annum for payment of interest and liquidation of cost of issue after 40 years ..... .73 " "
- (d) Annual payment of interest and sinking fund on £500,000 paid out of capital, representing an annual charge of £20,650 payable from the profits of the amount of the Loan available for investment i.e. £2,200,000 of which £1,100,000 is allocated to the Usin Gishu Railway, and represents and annual charge thereon of 1.66%..... 1.66 " "

*Calc. at 10%*  
*73-10/100*  
*500,000 = 500,000*  
*10%*  
*50,000*  
*1.66*

(Say  $\frac{9.72}{10\%}$ )

And, alternatively the value of the Loan to Kenya after its investment may be looked upon as 10%.

2. If sleepers are to be compared and the cost of one desired in terms of the cost of the other, the two costs to be such that for the given lives the two sleepers may show the same value, this cost is found from the following expression, in which "c" is the cost of the sleeper lasting "n" years and "d" the cost of the sleeper lasting "r" years and "r" rate of interest.

$$c' = \frac{c}{n} \left( \frac{n r + 1}{n r^r + 1} \right)$$

The statement of relative values as submitted by the committee has been verified and is reproduced below in what is hoped is an intelligible form:

Report by Chief Engineer

2 continued

Cost of Steel Sleeper	Justifiable expenditure on a orestoted podocarpus sleeper with 2 bearing plates; life 16 years	Justifiable expenditure on a M'sharagi sleeper not orestoted and with no bearing plates; life 10 years	Justifiable expenditure on a M'sharagi sleeper not orestoted and with no bearing plates; life 12 years.
12/10d	11/11d	9/7d	10/0d
11/0d	10/11d	8/10d	9/9d
8/-	6/0d	7/0d	

Table showing comparative value of orestoted Podocarpus sleeper with 2 bearing plates and M'sharagi sleeper in terms of the cost of a steel sleeper costing 12/10d and 11/10d.

It being assumed that:-

(A) Podocarpus sleeper has a life of 20 years  
 (A) M'sharagi sleeper has a life of 16 years  
 (A) M'sharagi sleeper has a life of 10 to 12 years  
 Interest at 10% per annum.

Questions contained in Memorandum accompanying the Secretary of State's despatch No. Kenya 324 of 1.3.23

Replies by Chief Engineer.

3. It is not stated whether podocarpus or msharagi timber is intended to be used. If msharagi, it is not stated whether the timber is to be creosoted or merely seasoned.

4. Is it intended to use bearing plates, and, if so, has their cost been allowed for in the various estimates?

5. What is expected to be the cost of binding the ends of the sleepers to prevent splitting? Has this cost been allowed for in the estimates?

6. Do the estimates include the cost of creosoting, if that is proposed? What arrangements have been made for obtaining a firm contract for creosoting and at what price?

7. What has been the result of the enquiries which were to be made as to whether sufficient timber was available locally for providing sleepers?

3. The intention was to use podocarpus creosoted.

4. The intention was to use bearing plates, and their cost is allowed for in the various estimates.

5. It was not proposed to bind the ends of sleepers, as experience shows that the binding in many cases becomes loosened or destroyed during loading, railway transport, unloading, laying, lifting and packing, and the advantages anticipated are not realized.

6. The estimates include the cost of creosoting podocarpus sleepers. Messrs Equator Saw Mills Ltd., have a creosoting plant and creosot oil available at Maji Mazuri Station, Mile 44 on the Uasin Gishu Railway. A firm offer to supply creosoted sleepers has been received from Messrs Equator Saw Mills Ltd., but as the date of delivery and other conditions required by the Railway could not be met by Messrs Equator Saw Mills Ltd., negotiations have fallen through.

The price quoted for a creosoted sleeper is Shs.8/50 each, which is understood to be, sleeper Shs.6/- creosoting Shs.2/50; total Shs.8/50.

7. Judging from the replies received to a public advertisement calling for timber sleepers, there appears to be at the present time sufficient timber in the forests served by Railways to supply the demand for a considerable number of years.

(continued on Page 4)

Questions contained in Memorandum accompanying the  
Secretary of State's despatch No. Kenya 324 of 1.3.23

Replies by Chief Engineer,

Assuming that there is sufficient suitable timber  
providing the sleepers initially required, will there be  
enough to provide for periodical renewals?

(If not, the initial economy in the use of timber  
sleepers must be reduced by the difference in present value  
between a series of renewals of steel sleepers at intervals  
of, say, 20 years beginning with one case, 15 years hence and  
the other case 20 years hence. The effect, at 6% interest,  
would appear to reduce the saving of 1/8d per sleeper on the  
initial cost to a figure in the neighbourhood of 8d per sleeper)

B. Yes - probably for the immediate and close future. A  
further supply depends on how far new railways will serve the  
forests of the Colony.

J.R.R.

CO. 533  
24

dated 11th October 1922

UASIN GISHU RAILWAY

Tenders for the Supply of Timber Sleepers

Tenders are invited for the supply of about 183,000 wooden sleepers. Specifications and conditions of tender can be obtained at the Office of Messrs Griffiths & Co., Ltd. Nairobi and Sabatia, between the hours of 10 a.m., and 4 p.m. up to and including the 14th October.

Tenders will be opened at noon on 25th October and no tender received thereafter will be considered.

The lowest or any tender will not necessarily be accepted.

Griffiths & Co., Ltd.

SPECIFICATION.

The Sleepers to be to standard size i.e., 6' long x 9" broad by

5" thick.

1. Sleepers and bridge timbers to be creosoted are to be cut from *Pedocarpus Gracillier* or *Pedocarpus Milianjanus* and in such a manner that when seasoned and dry they will conform to the sizes mentioned in the Schedule.

2. They are to be hewn or sawn parallel on all sides straight and out of winding.

3. They are to be cut from sound timber out of large trees and to be free from sapwood, splits and shakes, large or loose knots and from other defects.

4. They are to be cut square at ends, to be of sizes specified when seasoned and dry, within the following limits:-

- Length Not more than one inch under or two inches over specified length.
- Breadth Not more than  $\frac{1}{4}$  inch under or  $\frac{1}{4}$  inch over specified breadth.
- Thickness Not less than the specified thickness nor more than  $\frac{1}{4}$  inch over specified thickness.

5. When cut green the proper allowance for shrinkage must be made to bring the timber to the specified dimensions as above when seasoned and dry.

6. All timber after being cut must be clearly stamped on one end PG or PM according to the species by the Contractor. It must then be suitably stacked in properly cleared and drained staking grounds for air seasoning.

7. After a suitable number as laid down in conditions of contract have been stacked, they will be inspected by the Forestry Officer to see that they are properly stacked and each timber will be stamped with the date of inspection on the same end as previously stamped. A proportion will be weighed by the Inspecting Officer on scales to be provided by the Contractor.

8. The timber will remain in stacks for at least six months after being dated by the Forestry Officer, and as much longer as may be necessary to reduce the moisture content to 15% of its oven dry weight. The necessary sample timbers taken from the stacks, for ascertaining the above information must be provided by the Contractor free of cost and will be in addition to the number to be finally delivered.

9. The timber will then be inspected by an official of the Uasin Gishu Railway, and all those that comply with the above conditions as regards time of seasoning and moisture content will be stamped (U.G.R.) on the same end as previously stamped and a percentage weighed on scales to be provided by the Contractor. Split, warped or otherwise damaged timber will not be so stamped.

10. Previously to creosoting two truly even bearings

shall be formed on the top-side of the Sleeper - (that farther from the heart of the tree) to form the seat for the bearing plates, and at one end the Sleepers shall be bored with four  $\frac{1}{2}$ " diameter holes which shall pass through the Sleeper; all to template as shewn on attached diagram.

11. The timber will then be thoroughly creosoted by the Kueping process finishing with a vacuum and in such a manner as to leave at least 5 lbs of creosote per cubic foot in the timber on completion of the treatment.

12. The Contractor will be called upon to supply the following information certified to be correct:-

- (a) Specification of creosote used, which must be of first class quality.
- (b) All readings of temperature, time, etc. and details of each treatment of each batch of timbers, showing clearly quantity of creosote absorbed, quantity of timber treated, etc., etc..

13. The Uasin Gishu Railway reserve the right to test, from time to time, samples of the creosote used, and also to send an Inspector to supervise the methods employed and the taking of the readings and details asked for in 12 (b) above.

14. On completion of the creosoting process the sleepers will be handed over to the Railway for acceptance at the nearest Railway Station where a final inspection, especially as regards size and condition, will be made, and all timber that does not fully comply with the above specifications will be rejected.

Split, warped or otherwise damaged sleepers will not be accepted.

15. Finally accepted timber will be stamped (U.G.R.) with date on the end opposite to that already stamped.

All rejected timbers will be immediately removed from Railway premises.

16. Accepted timber will then be loaded into trucks by the Contractor and despatched as directed.

The Sleepers should be bored on one end only by four  $\frac{1}{2}$ " diameter holes to a template as shewn on the attached diagram, all previous to creosoting. Holes so bored to pass through the Sleepers.

The holes at the other end of the Sleeper will be bored in the field, liquid creosote being introduced in the holes bored previously to the driving of the dog spikes.

The Sleepers shall be laid with the side towards the heart down and the top side or side farther from the heart shall be adzed to a truly even surface to give the bearing plates a seat, all to the dimensions shewn on the attached diagram.

.....

*Enclosure D*

SABATIA  
9th January 1923

82

No.41/4355

The Equator Saw Mills Ltd  
P.O. Box 201  
Nairobi.

Dear Sir,

TENDER FOR TIMBER SLEEPERS

With reference to your letter No. Q. 33/1 dated the 1st. December, 1922, I have to inform you that I have now received authority to accept your amended tender regarding the above, viz. Sns 8/50 (stillings eight and cents fifty) per sleeper.

General details as to payment, inspection and delivery to be decided and your tender is therefore accepted provisionally pending the arrangements of these details and completion of a formal contract for the delivery of the sleepers.

I am proceeding on safari tomorrow the 14th inst. and will be absent from Headquarters for about a week. On my return to Sabatia, I shall be much obliged if you could arrange for your representative to meet me here so that we can arrange the necessary details and prepare the formal contract.

A suitable date will be every day between 14th inst. and 21st inst.

My early reply will oblige

Yours faithfully,

(sd) C. Mitchell

AGP



*Insolence*  
No.81/B/1019

Office of the Chief Engineer  
Construction and Survey of  
Railways.

March 2nd 1923

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U R G E N T

The Hon. Colonial Secretary  
The Secretariat.  
Nairobi.

Sir,

Uasin Gishu Railway  
Timber Sleepers

In continuation of my letter No.172/213 of the 11th January, 1923, I have the honour to inform you that on Tuesday, the 27th February, a conference was held at Messrs Griffiths & Co Ltd's office, Sabatia, regarding the supply of timber sleepers, the following Gentlemen being present:-

Mr. B. Bradley, for and on behalf of Messrs E.S.M.Ltd

Mr C.Mitchell, Agent for Messrs Griffiths & Co.Ltd.

Major J.S.Burns, Chief Assistant Engineer, Construction & Survey of Railways, for and on behalf of Lt.Col.J.K.Robertson, Chief Engineer Construction and Survey of Railways.

I regret to report that Mr.Bradley, on behalf of Messrs E. S. M. Ltd., declared his inability to accept the conditions put forward by Messrs Griffiths & Co. Ltd, based on the requirements of the Chief Engineer, Construction & Survey of Railways, and that under these circumstances, Messrs Griffiths and Co.Ltd., withdrew their provisional acceptance of the tender submitted by Messrs E.S.M.Ltd.

The negotiations with Messrs E.S.M.Ltd, have been prolonged to the latest date in the hopes that terms, on a fair and equitable basis, would be secured for all parties concerned, and that the Colony would benefit in advancing a product of the country.

The Hon. Colonial Secretary  
Nairobi.

The chief clauses of the specification which Messrs E.S.M.Ltd; were unable to comply with, are as follows:-

- (1) Delivery.
- (2) Penalty for failure to fulfil conditions.
- (3) A sleeper to standard dimensions (thickness) with limitations.
- (4) Moisture content.

With regard to (1), this is a point which has to be considered with great care as there are economic which should be taken into account in the interests of the Colony; such as:-

- (a) Progress of construction.
- (b) Maintenance of staffs (Government and Messrs Griffiths & Co. Ltd) due to retardation of progress.
- (c) The owners of land waiting to be served by the Railway.
- (d) Penalty for Failure

In discussion Messrs E.S.M.Ltd stated that they were not prepared to deposit any guarantee for fulfilment of the order to requirements in the stipulated time (November 30th 1923) and considered that January, 1924 was a date more suitable to themselves.

- (3) A Sleeper to Standard Dimensions (thickness) with limitations

A point that must be adhered to.

- (4) Moisture Content. The proposed conditions were amended and the allowance of moisture increased to the very maximum, and beyond the present limit one must not go.

Under the foregoing circumstances I beg to request that His Excellency, the Governor's sanction be obtained for

The Hon. Colonial Secretary  
Nairobi.

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The Hon. Colonial Secretary  
Nairobi.

March 2nd 1923

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the purchase in England of the balance of the sleepers required for the completion of the Uasin Gishu Railway; these sleepers to be of steel. At the present time there are no sleepers of any kind on order, and the stock now available will only carry the line to approximately Mile 110. Progress is so satisfactory that it is anticipated the track will reach Narasha, (Mile 74) in May this year, the vicinity of Eldoret, (Mile 23) in October of this

It is to be realized that if delay in the place of construction will be considerably

reference to the fact on record that Mr Bradley, on behalf of Messrs E.S.M. Ltd; due to the failure of the conference

the placing of the order for the timber sleepers with the Messrs E.S.M. Ltd. has threatened the Uasin Gishu Railway with injunctions, in an endeavour to stop the line from being carried over Messrs E.S.M. Ltd's trolley line at Maifi

thus impeding the construction of the Railway. In your information I enclose copies of Messrs Griffiths & Co Ltd's letters to Messrs E.S.M. Ltd (No. 11/ of the 27/2/23) and to this office (No. P.1/420 of the 27/2/23).

I have the honour to be,  
Your obedient servant,

sd/ John S. Burns  
for Chief Engineer  
Construction & Survey of Railways.

Copy.

11/4870

Sabata,  
February 27th 1923.

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To  
The General Manager  
The Brunner Saw Mills  
Sadler Street  
Nairobi.

Dear Sir,

WOODEN SLEEPERS

With reference to our letter of the 9th ultimo regarding above.

We understand, as a result of a conference held at this office this morning with your Mr Bradley, that you are unable to comply with the conditions in the specification as laid down by the Resident Engineer, Uasin Gishu Railway.

This being so, we regret that we have no alternative but to withdraw the provisional acceptance of your tender dated the 1st December, 1922.

Yours faithfully,

sd/ Griffiths & Co Ltd.

Sabatia, 27th February 1923.

Reference P.1/4820

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To  
The Resident Engineer  
Uasin Gishu Railway.  
Eharaesura.

Dear Sir,

At a conference held today at this office regarding the supply of the above, Mr Bradley on behalf of the E.S.M. Ltd. and your representative, Major Burns being present, the following points contained in your specification viz:-

(1) Thickness of Sleepers, and (2) Percentage of moisture not to exceed 18 per cent, were fully discussed, and Mr Bradley, on behalf of the E.S.M. declared his inability to accept these terms.

(2). In order to ensure that no delay will occur in the completion of the line, it will be necessary that the delivery of the whole of the sleepers should be completed by the end of November, 1923. With this condition also Mr Bradley was unable to comply.

(3) We also understand that the E.S.M. would not be prepared to give any guarantee for the performance of their contract without substantial modification of your specification.

(4) Under the circumstances therefore we have no alternative but to write to the E.S.M. withdrawing our provisional acceptance of their tender. We enclose a copy of this letter for your information.

(5) As we definitely understand that it is not your intention to modify the specification in any way, in order to minimise the risk of any delay in the completion

of the works, it will be necessary for us to cable Home and place orders for the balance of the steel sleepers required.

(6) . . . . . Owing to the delay which has already occurred in the protracted negotiations with the E.S.M. we shall be glad to have your formal consent to placing these orders as soon as possible.

Yours faithfully,

sd/ Charles Mitchel

Agent

for Messrs Griffiths & Co Ltd.

Confidential

22nd May 1923

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The Hon. Acting Colonial Secretary  
The Secretariat,  
Nairobi.

TIMBER SLEEPERS

Your Urgent Confidential letter No.  
7345/12/137 of 17th May 1923

At meetings with His Excellency on the 6th December, 1922 and 13th January, 1923, I informed His Excellency that Messrs E. S. M.'s tender for sleepers would be accepted.

At <sup>the</sup> same time I understood that Messrs E. S. M. Ltd., had <sup>been</sup> sawn and stacked 40,000 timber sleepers as early as 24th October, 1922, and that these sleepers, in every way, complied with the Uganda Railway specifications.

On the 11th October, 1922, tenders were publicly invited for supply of sleepers, all to a specification and condition of tender, copies of which were obtained at the end of Messrs Griffiths & Co.

This specification laid down as conditions of supply that sleepers must not be less than a specified thickness and, when cut fresh, proper allowance should be made for shrinkage, and further, that the timber should remain in stock for at least six months, and as much longer as may be necessary, to reduce the moisture contents to a suitable percentage of its own dried weight.

It was under these conditions that Messrs E. S. M.'s tender was provisionally accepted by Messrs Griffiths & Co. on the 6th January, 1923, and it was in anticipation that Messrs E. S. M. Ltd., would supply sleepers to specifications that I informed His Excellency that Messrs E. S. M. Ltd.'s tender would be accepted.



It was not until the 27th. February, 1923, that Messrs E. S. M. declared their inability to supply sleepers to comply with the specifications as to thickness and seasoning, and also that they were unable to deliver the sleepers to the dates required by Messrs Griffiths & Co.

This announcement by Messrs E. S. M. led to the whole question being reconsidered and eventually to the decision not to use timber sleepers.

sd/ J. K. Robertson

Chief Engineer  
Construction & Survey of Railways