

raise the question of ^{making} ~~the~~ ^{to the Trans} ~~the~~ necessary payment ^{sinking fund} ~~in~~ respect of interest & principal ~~to~~ about November next.

have

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own Agents

Magadi Railway
Soda wagons.

Date.
1912
1 Feb.
at previous Paper.
No.
26319

Submit for instructions, Cases. with Cons. Exps. Soda Co. & Mr. Currie resp. dispute as to design of wagon suitable.

10 Feb
Copy (with last circled) to Mr. S.S.

Mr. Read.

under clause 37 of the contract with the Magadi Soda Company, the Uganda Railway Administration has to provide all necessary rolling stock... for the efficient working of the Railway (i.e. the Magadi Branch). It is now a question of the type of wagon to be adopted for carrying the soda. Mr. Currie of course wants waggons which will be suitable for carrying ordinary merchandise on the up. journey. The Company want a wagon which will be entirely self-discharging. There is great difficulty in producing a vehicle

at subsequent Paper

which will satisfy both requirements. The Company's engineers have submitted a design (see Messrs Rendel & Robertson's letter of the 12th of Oct^r) which our C.E. think might, with certain modifications, comply with the Railway requirements. Mr Currie objects, (letter of 16th Nov^r), saying that the use of this wagon would mean an expenditure of £7,400 p.a. to the Railway on unnecessary haulage. He recommends another type, out of which the "bulk of the soda" will discharge itself, or estimates that African labour costing £320 p.a. will suffice to discharge the remainder.

The Magadi people question this estimate of cost, but say that, even if the figure were doubled, the actual cost of the hand discharging to be done would not be a vital matter. They assert that the atmosphere in the closed soda wagon would be such that men could not be found to work in it, or could only do so at the risk of permanent injury to their health. They therefore adhere to their demand for a wagon which will be entirely self discharging.

Mr Currie

rates for

(Letter
They all
that is
than
the soda
be "self"
on Mr. Currie
plan

of 18 (Jan^r)

the soda traffic on the assumption that he would be able to use the returning waggon for ordinary goods. His desire, therefore, to get waggon of the greatest general usefulness commands sympathy. On the other hand, it seems impossible to dispute the Company's objection to hand discharge of even a portion of the soda. Our C.E. think that Mr Currie rates too highly the disadvantages of the Company's plan. They point out that the dead weight of the wagon proposed by the Company is only nearly more than that of the wagon proposed by Mr Currie, or that, although the cubic capacity is only 1440 cubic feet as against 1940, it is by no means certain that this difference in capacity is of importance as the Railway management admit that there will be a smaller (up) traffic than they expected.

On this account of it, the Soda Company appear to me to have the better case. But the S. of B. clearly cannot overrule the Govt. (which is what it

comes to.) without going into the matter fully with him, & he is not in a position to say bluntly to the Company that they must take what is offered to them.

It would seem that a very reasonable difference of opinion has arisen, & that there is no provision in the Contract for settling it, short of arbitration, unless the parties can come to some agreement.

I think it would be well to warn Sir P. Girouard by telegraph that no settlement has yet been come to in this matter, & that it is proposed that ~~he~~ he should endeavour to arrange it with the Company direct when he comes home, & that he should therefore come furnished with the necessary information: confirm by despatch, sending a copy of this letter & its enclosures, from the Crown Agents' letter of the 5th of Jan^r onwards; & tell the C.A. what we have done.

HAB.

Feb. 5.

at once.

H. J. R.

[Signature]

E.

283/19

ALL COMMUNICATIONS
TO BE ADDRESSED TO THE
CROWN AGENTS FOR THE COLONIES,
THE ABOVE REFERENCE AND THE
DATE OF THIS LETTER BEING QUOTED.

TELEGRAMS, "CROWN, LONDON."
TELEPHONE 1852 VICTORIA.

WHITEHALL GARDENS,
LONDON, S. W.

Enclos.

1st February 1912

Magadi Railway - Soda Wagons

Sir,

Under cover of your letter of the 14th August last No. 26319/11 you transmitted for our information and guidance a copy of the following telegram from the Governor of the East Africa Protectorate to the Secretary of State:-

"No. 15, August 4th. Crown Agents are negotiating with ~~Messrs~~ Company regarding design of wagon to carry soda. Under clauses 37 and 42 (g) of Contract we are under no obligation to provide self dischargers. I can only accept self dischargers provided design is quite suitable for ordinary traffic as well as soda. Please make this quite clear to Crown Agents and Magadi Company."

2. I have now the honour to transmit for the information of the Secretary of State copies of our correspondence with the Manager of the Railway, the Consulting Engineers, and the Magadi Soda Company.

3. The Soda Company it will be observed maintain that a type of wagon which shall be entirely self-discharging is essential to their interests, and point out that the unloading of soda by hand would be attended by serious inconvenience and difficulty.

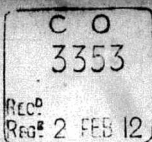
4. The Soda Company's Consulting Engineers, Messrs. Livesey Son & Henderson, designed a wagon to meet the Company's requirements and we submitted this

The Under Secretary of State,

&c &c &c,

Colonial Office

*2 C this + last
33 notes* 84



design, with others prepared by the principal rolling stock builders in this country, to Mr. Currie for his consideration. Mr. Currie reports that he cannot accept the Company's design as in his opinion it will not serve economically the double purpose of carrying soda to the coast and of carrying ordinary traffic to the interior. He recommends, with certain modifications, the design submitted by the Leeds Forge Company, which is however not entirely self-discharging and is therefore unacceptable to the Soda Company.

5. After perusing Mr. Currie's remarks and conferring with Messrs. Livesey Son & Henderson, the Consulting Engineers advise us that it is impossible to design a wagon which will meet the requirements of both parties.

6. The contract with the Soda Company is indefinite respecting this question, and we do not know what was the intention when it was drawn up. It appears in the circumstances that the matter cannot be settled as proposed, but must be decided by the Secretary of State or the Governor, who will doubtless consider how far it is desirable to provide for the purposes of this contract stock alleged by the Colony to be unsuitable for their purposes.

7. We await instructions before taking further action.

I have the honour to be,
Sir,
Your obedient Servant,

R. Currie
For Crown Agents

E.

283/19

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TO BE ADDRESSED TO THE
CROWN AGENTS FOR THE COLONIES,
THE ABOVE REFERENCE AND THE
DATE OF THIS LETTER BEING QUOTED.

TELEGRAMS, "CROWN, LONDON."
TELEPHONE 1632 VICTORIA.

Enclos.

WHITEHALL GARDENS.

LONDON, S. W.

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The Under Secretary of State,

&c &c &c,

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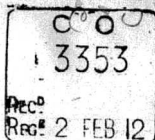
I have the honour to be,
Sir,
Your obedient Servant,

Precher
for Crown Agents

C O
3353REC'D
FEB 2 1912Enclosures.

Rendel & Robertson to Crown Agents	10.4.11.
-do-	21.4.11. (Extr.)
-do-	12.6.11. (2 letters)
-do-	21.7.11.
Man. to C.As.	Tm. 8.8.11.
R. & R. to C.As.	13.9.11.
C.As. to Co.	20.9.11.
C.As. to Man.	20.9.11.
R. & R. to C.As.	12.10.11.
C.As. to Man.	13.10.11.
Man. to C.As.	16.11.11.
C.As. to Co.	5.1.12.
Co. to C.As.	10.1.12.
C.As. to R. & R.	17.1.12.
R. to C.As.	18.1.12.

Messrs Rendel & Robertson to Crown Agents.



13 Dartmouth Street S. W.

10th April 1911.

Uganda Railway - Magadi Lake Section.

Gentlemen,

We have your reference No. W/1769 of the 7th April asking us to furnish you with the necessary Specification and drawings for high-sided bogie wagons suitable for ordinary traffic and also the carriage of soda in bulk.

2. We may say that this matter was fully discussed with Sir Percy Girouard before he left and it was decided that it would hardly be feasible to get out a suitable design for wagons until it was known definitely what arrangements would be made by the Company for loading the soda into the wagons and discharging it at destination and at present we have heard nothing further upon these points which materially affect the design of the wagons. The request that the wagons shall also be suitable for ordinary merchandise makes the question still more difficult.

3. However, we will again consult Mr Sandiford and we may say that we have already sent to the Manager of the Uganda Railway a design for a suitable bogie wagon for ordinary traffic, vide our letter of 17th March forwarded to you on 18th March and it is possible that this may be adapted for the carriage of soda and we are looking further into the matter and will let you have a specification as soon as possible.

We are &c.

(Sgd) Rendel & Robertson.

Extract of letter from Messrs Rendel & Robertson to Crown
Agents dated 21st April 1911.

Uganda Railway - Reqn. No.1769 - High-sided Bogie
Wagons and Brake Vans.

With reference to your memo. of 7th April
with copy of cable from Sir Percy Girouard we now forward
a typewritten copy of specification and drawings for
exhibition for 10 high-sided bogie wagons and under-
frames for 10 brake vans. As mentioned in our letter
of 10th April we consider it will be exceedingly difficult -
if not impossible - to ~~design~~ a wagon entirely suitable
both for conveyance of soda in bulk and for general
merchandise, but we have provided for this in our Specifi-
cation and asked for various proposals from the firms
tendering.

x

x

x

x

Messrs Rendel & Robertson to Crown Agents.

12th June 1911.

Uganda Railway - (Magadi Section).

Report on Tenders & Designs for Bogie Wagons for carriage of Soda in bulk, and General Merchandise also for 10-ton Brake Vans.

Gentlemen,

We have examined and herewith return the tenders and designs for the above.

2. It will be observed that our Specification whilst giving all the information available concerning the wagons and the conditions to be met, and suggesting the general lines which the design might follow, has left firms tendering a free hand regarding it.

3. The type of bogie specified has closed ends and laminated springs over the axleboxes and we have found it very satisfactory. It can be made by any firm as there are no patent rights, and was specially approved by the Locomotive Superintendent Uganda Railway, after conference with us. We, however, provided that firms tendering might quote for a "diamond frame" bogie of approved construction if they wished to do so.

4. Seeing the difficulty of getting a suitable roof for both soda and ordinary traffic in steel we also provided for a tarpaulin and ridge pole covering as an alternative.

5. Owing to the action of soda on paint (vide para. 9 of our Specification) we provided for the extra cost of galvanising the body of the wagon.

6. With these remarks we review the tenders received:-

(a)

(a) The lowest tender is from Messrs G. R. Turner Ltd. at £220 per wagon and £117 per brake van. The design of wagon sent in, however, shows a "diamond frame" bogie a tarpaulin covering and no provision for bottom discharge. If the design provided for the bogie specified, for a steel roof with special provision for loading, and for arrangements for bottom discharge, the cost would probably be increased by about £50 per wagon, and this should be taken into account when comparing Messrs Turner's tender with others which follow. We do not think that this design has anything special to recommend it or goes far to solve the difficulty of providing a suitable double-purpose wagon. The tare is given at 11 tons and the paying load 20 tons.

(b) The next tender is from the Leeds Forge Co. Ltd. who seem to have gone into the matter carefully. They ask £280 each for the wagons and £121 for the Brake Vans. The wagon they propose has a removable roof built in segments which can be taken off when not required and each segment is provided with a door for loading the soda. In discharging through the bottom they provide segmental doors operated by toothed gearing. These doors would discharge the bulk of the soda without hand labour, and the aperture above them could be covered by timber frames when used for ordinary traffic, and the side doors would then be available as well. The side doors would be kept soda-tight when carrying soda in bulk, by battens wedged tightly across them on the inside.

Altogether we think this design is a very fair solution of the difficulties to be met. The detail we do not like about it is the bogie shown on the Leeds Forge drawing. It is an open-ended bogie with small

helical

helical springs over the axle boxes. It is of the type sent with some of the first stock to Uganda and some lines in India when very light loads were in vogue, but has proved unsatisfactory in many ways and we cannot recommend it. We understand however that the Leeds Forge tender at £280 covers the cost of the superior type of bogie specified and even at the expense of curtailing the bottom doors somewhat in a longitudinal direction we recommend that it shall be adopted when the wagons are ordered.

Although we thought that the use of tarpaulins might help to solve the difficulty of a removable yet watertight covering for the wagons, the designs sent in for dealing with this do not appear to be so satisfactory as a removable steel roof and the cost of the tarpaulin is considerable.

The tare of this wagon with the close-ended bogies specified is 10.5 tons and the paying load 21.5 tons.

(c) The next tender is from Messrs Stableford at £290 per wagon and £118 per Brake Van. The design they send is for a Covered Goods Wagon fitted with doors in the roof and shoots in the floor as used for handling grain in the Argentine. This might suit for an "all-soda" wagon but would not do so for a double-purpose wagon. The height for loading also might be objectionable. The tare is stated to be 9.5 tons but we should rather doubt this estimate.

(d) The next tender is from the Gloucester Railway Carriage & Wagon Co. Ltd. at £293 per wagon and £122. 10. 0. per Brake Van. The design sent in gives no details but merely shows a shoot in the bottom and states "roof to be made portable". It has nothing to recommend it.

(e)

(e) The next tender is from the Metropolitan Amalgamated Railway Carriage and Wagon Co. Ltd. at £301 per wagon, and £138 per brake van. The design of the wagon provides for large doors opening in the roof which can be easily removed when not required, as well as the roof bars and longitudinals. It includes drop doors in the bottom of the floor whilst special wedge-shaped bolts are provided for the side doors to draw them closely up and make them soda-tight. This design appears to be a good one though the price asked is higher than that of the Leeds Forge. The tare of the Wagon is given as 12 tons and the paying load 20 tons.

(f) The next tender is from Messrs P. & W. MacLellan Ltd. at £318 per wagon and £134 per Brake Van. The design they propose for the wagon has loose carrugated sheets fitted over the top of the wagon and secured by lashing ropes and chains. This method, although simple, does not commend itself to us. The sheets would, we fear, become bent and would not fit when once removed, and the lashings and chains for securing them, and the difficulty of making them water-tight are disadvantages which more than compensate for simplicity of construction. The bottomhoppers for discharge are simple and easily operated from the sides of the Wagon but not so good as those offered by the Leeds Forge Co. Ltd. The tare of the wagon is 10. 6 tons. The paying load is not given.

(g)

(g) The final tender comes from the Birmingham Railway Carriage and Wagon Co. Ltd. at £335 per wagon and £144 per Brake Van. The design for the wagons sent in by this firm follows a suggestion made in our Specification (para. 2-C) and provides for a sliding roof in three sections, running on rollers, any one section of which can be moved to give the most convenient opening for loading, either for soda or ordinary traffic, provision being made to secure the ends and joints being watertight. This, we think, is a very suitable way of covering the double-purpose wagon, but its extra cost would not justify us in recommending it. The discharge of the soda is by hopper shoots, worked by gearing from the side of the Wagon and seems efficient. This firm also sends a design for dealing with tarpaulins if used. The tare and paying load are not given.

7. Galvanising. See paragraph 9 of our Specification. Galvanising is the only method we can suggest for protecting the steel plates of the wagons inside as the soda attacks all kinds of paint. The extra cost of galvanising however is from £20 to £30 per wagon, and we doubt if the extra cost and time required would be justified. This appears to be a point upon which the authorities in Uganda can best form an opinion.

8. In conclusion we think the result of these tenders confirms our former reports as to the great difficulty in designing a wagon to suit both the soda and ordinary traffic. All the designs sent in have features of merit, though none are free from some objections. Having regard to price, general conditions, and delivery, the Leeds Forge tender on the whole appears to us to be the best value. The final selection, however, must depend upon the methods proposed of loading and discharging the soda.

We are &c.

(Sgd) Rendel & Robertsen.

Messrs Rendel & Robertson to Crown Agents.

12th June 1911.

Uganda Railway - Magadi Section - Bogie Wagons.

Gentlemen,

We have your letter of 1st June enclosing copy of a sable, No.117 dated 25th May from Sir Percy Girouard and as the circumstances which have led up to the ordering of these wagons have become rather involved, we give a resumé of what has passed, so far as our knowledge goes:-

2. In our letter to you of 10th April we dealt (in para.2) with the question of a design for a wagon for the carriage of soda and as therein mentioned it was not considered feasible to get out a design suitable for both the carriage of soda and of ordinary merchandise, although in his telegram No. 63 of 25th March, Sir Percy Girouard asked that wagons suitable for both purposes should be ordered, suggesting that we should consult Mr Sandiford the Locomotive Superintendent, then on leave. In para. of our letter we dealt with the question of a design for bogie wagons suitable for ordinary traffic.

3. We had a further interview with Mr Sandiford and discussed details and suggestions for designs of wagons of both classes with him.

4. We then prepared a specification calling for designs for a wagon suitable both for carrying soda and ordinary goods so far as was possible, and the tenders have now been sent to us for report, together with the various designs submitted by the makers.

5. We now receive Sir Percy Girouard's telegram No.117 of 25th May stating that the design for "bogie carriages" (this must be a mistake for "bogie wagons") sent by us for the carriage of ordinary merchandise has been accepted for these 10 vehicles. They are urgently required and must be ordered at once.

6. The designs sent in with the tenders are as above mentioned an attempt to solve the problem of a double-purpose wagon but in the face of the latest telegram received, we do not consider that any of them should be accepted, but that wagons of the ordinary type (which we may observe are of the same general over-all dimensions as the double-purpose wagon) should be ordered, and we recommend that further tenders be invited at once for wagons of the ordinary type.

7. Meanwhile as we understand from you that the Magadi Company are anxious to be consulted with reference to the design of wagons for the soda traffic, we suggest that a copy of our Specification and the tenders, together with the designs received, be sent to them for any remarks and also they should be asked to state definitely what appliances they propose for loading the soda into the wagons and into what receptacles the wagons will discharge, if necessary illustrated by sketches.

8. No doubt you would also make it quite clear to them at the same time that the 10 wagons now ordered will be used for ordinary traffic for the present, but might be converted hereafter if they are actually required for soda.

9. As regards the ordinary wagons, we now enclose a new schedule and specification for them and if you will have these lithographed and returned to us as soon as possible tenders can be invited from all the firms who have recently tendered for the double-purpose wagons. A clear week should, we think, be enough for the preparation of the tenders.

10. As regards the tenders for the brake vans and
the

the wheels and axles we think the acceptance of these had better be deferred till we receive the tenders for the ordinary wagons and the whole can be considered together. Firms might be asked to keep their tenders open for a few weeks.

We are &c.

(Sgd) Rendel & Robertson.

P.S. The brake van tenders appear on the same schedule as those for soda wagons. The wheels and axles are separate tenders and are also returned herewith.

Messrs Rendel & Robertson to Crown Agents.

21st July 1911.

Uganda Railway - Wagons for Magadi Soda Co.

Gentlemen,

In compliance with your letter of 16th June we have now had an interview with Messrs Livesey Son & Henderson.

2. The Soda Company intend to deliver the soda when it reaches the Railway into silos at a level sufficiently above the Railway to allow the soda to be dropped from the silos into the wagons which are to convey it to Mombasa. On arriving at the Pier at Mombasa the soda will be discharged through the bottom of the wagons by means of shoots into boxes (either placed between or on one side of the rails) from which the soda will be lifted by elevators to the height requisite for shipment and then discharged by other shoots into the ship's holds.

3. This plan will necessitate the use of a wagon

which

which will be entirely self-discharging and we understand that no design which embodies partial hand-discharge would be acceptable to the Seda Company first on account of the time taken in discharging and secondly because it is stated that men could not work in the atmosphere created by the soda dust. These are reasonable grounds for deciding the kind of wagon which should be supplied, but coupled with the fact that the wagons must be covered, it is impossible to design them so that they shall be suited to general merchandise as well as soda and that idea must for the present at least be given up. The tenders therefore you have received being based on designs allowing of such double employment are useless and fresh tenders must be called for.

4. Before proceeding to make the necessary new designs and Specification, we shall be glad to know if you desire to cable to Uganda on the subject. The order for the ten wagons for ordinary traffic on the tenders for which we report to-day need not be deferred.

We are &c.

(Sgd) Rendel & Robertson.

Copy of telegram from the Manager Uganda Railway
to Crown Agents for the Colonies.

8th August 1911.

Referring to your telegram to Treasurer design and full particulars Soda Railway Wagon must be sent here for approval it is improbable that I will accept designs unsuitable for ordinary traffic - Manager.

Messrs Rendel & Robertson to Crown Agents.

13th September 1911.

Uganda Railway - Magadi Soda Wagons.

Gentlemen,

With reference to your memo. of 10th August and our reply of 12th August we have been looking into the matter very carefully again and have come to the conclusion that it would be useless to try and obtain tenders for self-discharging wagons to suit the Magadi Soda Co's requirements and at the same time to make provision for carrying merchandise. That the wagons shall be entirely self-discharging is now demanded as a sine qua non by the Soda Co. and after considering various designs we are of opinion that no wagon can be entirely self-discharging which is not made with sloping sides and ends in some form of hopper. A wagon of this description cannot therefore in our opinion be considered suitable for carrying general freight although it would no doubt carry coal and some other loose commodities.

2. This therefore brings us to an absolute deadlock and we do not think that any good purpose will be served by delaying the matter further. We have two suggestions to make (a) that the tenders received for the "double purpose" wagons together with the designs and our report there should be sent to Uganda for the consideration of the authorities there, as it must be remembered that up to the present they have not seen any such designs nor do they know exactly what has taken place with regard to them. We return the drawings received with the tenders,

(b) As the Soda Company demand a self-discharging wagon with certain special features we suggest that their engineers be requested to furnish a design of a wagon which would suit, and on receipt of this, no doubt the authorities

Messrs Rendel & Robertson to Crown Agents.

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in Uganda authorities would be able to say how far they can accept such a design or what modifications (if any) they would require. If you agree to this the authorities in Uganda might be informed of your action but we do not think it necessary to delay forwarding the tenders, drawings and our report above referred to.

3. We think it desirable also that we should be in full possession of the various kinds of articles which would have to be carried under the terms "general merchandise". It is obvious that rectangular articles such as packing cases etc. could not be properly stowed in a hopper wagon.

(Sgd) Rendel & Robertson.

Crown Agents to the Magadi Soda Company Ltd.

Uganda Rly. 1769.

20th September 1911.

Sir,

With reference to the provision of wagons for the conveyance of soda on the Uganda Railway, I have to state that the Consulting Engineers recommend that we should send out as soon as possible for consideration by the management of the Railway a design of the self-discharging wagons with ^{certain} special features which your Engineers may consider best suited for the requirements.

2. We shall therefore be much obliged if you will be so good as to furnish us as soon as possible with a design of the wagons which your Engineers propose in order that we may submit it to the Manager of the Uganda Railway for his approval.

I am &c.

(Sgd) P. Ezechiel

for Crown Agents.

Crown Agents to the Manager Uganda Railway.

W/Uganda Rly. 1769.

20th. September, 1911.

Requisition 1769.

Sir,

In continuation of our letter No. 92 of the 11th. August, I have the honour to enclose a copy of a further letter from the Consulting Engineers regarding the type of wagon required by the Magadi Soda Co. for the transport of soda.

2. In accordance with the recommendations of the Consulting Engineers we are forwarding to you the tenders which were received for double purpose wagons, and under a separate cover the various designs submitted by the firms with their tenders.

3. As Messrs. Stableford & Co.'s tender has been accepted for the 10 brake vans, it is not possible to put it up with the others and a copy has therefore been sent.

4. We have also requested the Magadi Co. to furnish us as soon as possible with a design of the self-discharging wagon which their Engineers may consider suitable for the special purpose in view. On receipt of this design we will send it on to you with Messrs. Rendel and Robertson's remarks thereon.

5. You will no doubt furnish us as soon as possible with the particulars asked for in the last paragraph of the Consulting Engineers' letter of the 13th. September.

I am, etc.,
(Sgd.) P. Ezechiel
for Crown Agents.

Messrs. Rendel & Robertson to Crown Agents.

12th. October, 1911.

Uganda Railway

(Magadi Section)

Wagons for conveyance of soda.

Gentlemen,

In continuation of our letter of the 13th. September, we have had some further communication with Messrs. Livezey, Son & Henderson, the Engineers to the Magadi Soda Co. and they have submitted a proposal for a form of wagon they have used on one of the lines for which they act as Consulting Engineers, which was used for the conveyance of coal, and which we think, with certain modifications, might comply with the views of the authorities in Uganda. These wagons have a fixed hopper underneath the floor level, and hinged framed plates which are made to fold back and form a sloping end to the wagon, or they can be lowered down so as to form a continuous flat floor when required.

2. We enclose a print of the general design of such a wagon, which is marked "Order No. 21510, Drawing No. 64984". The difficulty which occurred to us was that this drawing showed an open-sided wagon, whereas the Soda Co. require that the wagons shall be covered and made water-tight, and it would be filled with soda from holes in the top of the roof. There would be no difficulty in providing such a roof, but the wagon would then be of little use for loading ordinary merchandise, and in our opinion the height would have to be raised to that of

a covered goods wagon.

3. In one of the Soda Company's designs for loading these wagons, we noticed that they were to be brought under an overhead shoot, which just cleared the top of the high-sided wagon, and we thought it desirable to write to Messrs. Livesey Son & Henderson pointing this out and asking them if their loading arrangements would permit of a greater height, and in fact of a covered goods wagon, of which we sent them a drawing. They reply "Our loading arrangements will be made to suit the construction gauge, so that any wagons that will go inside the construction gauge will suit our loading requirements".

4. This ^{is} satisfactory, and we therefore recommend that a copy of this letter together with the drawing of the hopper wagon referred to, should be forwarded to Uganda so that they may consider the design together with the tenders and other designs already received for double-purpose wagons, which we suggested in our letter of 13th. September should be sent to them. Perhaps it would be desirable to advise them by cable to await this further proposal before communicating home on the designs and tenders which they have.

We are etc.,

(Sgd.), RENDEL & ROBERTSON.

Crown Agents to the Manager Uganda Railway.

13th. October, 1911.

Sir,

In continuation of our letter of the 20th. September No. 108 respecting the type of wagon required for the transport of soda, I transmit for your information a copy of a further letter which we have received from Messrs. Rendel and Robertson covering a drawing of a hopper wagon submitted by the Magadi Soda Company's Engineers which Messrs. Rendel and Robertson think might, with certain modifications, meet with your approval.

2. In this connection I append a copy (decoded) of the telegram despatched to you today asking you to defer your decision on the papers covered by our above-mentioned letter pending receipt of the enclosed design.

"Please refer to our letter of 20th. September "108 wait our letter of this date before deciding."

I am, &c.,

(Sgd.) P. Ezechiel

for Crown Agents.

13 E/283/7.

12 Oct/11.

Blue print

The Manager Uganda Railway to Crown Agents.

No. 6015/210.

General Manager's Office,

Nairobi.

16th. November 1911.

Gentlemen,

I have the honour to acknowledge the receipt of your letter No. 108 W. dated the 20th. September and enclosures regarding the type of wagon for the Bagadi soda traffic.

I have also received your subsequent letter No. 126 E/283/7 dated the 13th. October 1911 forwarding a plan of the type of wagon suggested by Messrs. Livesey Son and Henderson.

2. I have carefully considered all these plans with Mr. Sandiford, and the conclusion we have come to is as follows:-

The wagon suggested by Messrs. Livesey Son and Henderson has inside dimensions of 24'0" x 7'6". This could be increased to 24'0" x 8'0" and if covered to the same height as our new bogies would have total effective inside dimensions of 24'0" x 8'0" x 7'6" i.e. a capacity of 1,440 cubic feet. It would then have a tare of at least 11.5 tons and would compare with our new bogies as follows:-

	<u>Length.</u>	<u>Breadth</u>	<u>Effective height.</u>	<u>Tare. Tons. Cwts.</u>	<u>Capacity c.ft.</u>
New bogie	32' 0"	8' 0"	7' 6"	10. 3	1,940
Soda wagon	24' 0"	8' 0"	7' 6"	11. 5	1,440

3.

3. The bulk of our ordinary downwards traffic averages about 120 cubic feet to the ton as it consists of skins, hides, cotton bales, fibre bales, chillies, grains etc. and our upwards traffic probably averages about 80 cubic feet per ton. The proposed soda wagon with its small cubic capacity and heavy tare would therefore be very uneconomical for ordinary traffic. It has also a bad ratio between tare and paying load on soda itself.

We have to haul the dead load on these wagons 380 miles from Kilindini to Magadi lake and the same distance back and we now get no back load from the Company in the way of coal as was originally anticipated. We consider therefore that this form of wagon is not suitable and we cannot accept it.

4. Of all the designs submitted the one which appears to us the most suitable is a bogie wagon practically identical with the 45 now under supply i.e. with dimensions of, length, 32'0" x, breadth, 8'0" x, height, 8'3" (maximum) on the improved bogie trucks with elliptical springs and fitted with 3 discharge apertures in the floor as proposed by the Leeds Forge Co. As suggested by the Consulting Engineers these apertures could be covered by timber frames when used for ordinary traffic.

When these doors are opened the bulk of the soda will fall out (20 tons in a wagon measuring 32'0" x 8'0" will only stand to a height of about 4 feet) and the rest can easily be shovelled out by hand. The maximum amount of soda the Company contemplates carrying

under

under their contract is 160,000 tons per annum. Taking 300 working days in the year this represents 533 tons per diem i.e. only 27 bogies of 20 tons each. A gang of twenty Africans drawing Rs.20/- per mensem each will easily clear all these at a cost of Rs.400/- per mensem say £320/- per annum. One ton unnecessary tare per wagon will mean for 160,000 tons of soda carried between Magadi and Kilindini in 20 ton bogies an unnecessary haulage of 6,080,000 ton miles per annum representing an unnecessary expenditure of about £7,400/- per annum.

I merely mention this point to show how unreasonable it is for the Company to expect us to accept an uneconomical type of wagons which will entail continuous heavy haulage charges on the Railway over 360 miles of line merely to save themselves a very small charge for unloading.

5. As regards filling we consider this should be effected through 3 (or 4 whichever the Consulting Engineers prefer) circular holes placed along the centre line of the roof. These should be closed by removable caps hinged so as to be easily taken off, vide sketch. Mr. Sandiford is of the opinion that if these caps are carefully made they should be perfectly watertight.

6. Only one standard door, placed centrally, should be supplied on each side of the bogies; these doors to be specially well fitted so as to exclude rain and prevent the escape of the soda.

7. As the bogie will be much higher than is actually required for the amount of soda it will carry I would suggest that, to ensure the vehicles not being

overloaded

overloaded, the Company be asked to fit a simple arrangement on the loading apparatus so that as the bogie comes under the shoot exactly $6\frac{1}{2}$ tons - by bulk - be discharged into each hole in the roof. (It will be 5 tons if 4 holes are provided). The soda if dropped vertically and carefully will probably not then require any trimming as the motion of the wagon on the rails will cause it to trim itself.

I request therefore that a design on the above lines be adopted and that one vehicle be built at once. It can be experimented on with fine sand. We have discarded the idea of paulin coverings as being unsuitable and expensive. We also agree with Messrs. Rendel and Robertson as regards galvanising. It will be very expensive and the result may not justify it. I must therefore ask the Consulting Engineers to protect the ironwork in some other way which will not be so expensive.

I may add that His Excellency the Governor has seen the plans and correspondence, also this letter. He concurs in what I have written.

I have etc.,

(Sgd.) H. A. Currie

Manager,
Uganda Railway.

Crown Agents to The Magadi Soda Co. Ltd.

0/283/7.

5th. January, 1912.

Gentlemen,

With reference to the question of the design of wagon for the soda traffic on the Uganda Railway we have transmitted to the Manager for his consideration the designs submitted at our invitation by the principal wagon builders in this country, together with a design proposed by your Engineers Messrs. Livesey Son and Henderson.

16 Nov/11.

2. I now enclose for your information a copy of Mr. Currie's observations on these designs.

3. It will be seen that he does not agree to the design suggested by your Engineers but recommends, with certain modifications, that submitted by the Leeds Forge Company of which a blue print is attached.

4. I have accordingly to ask whether you agree in the adoption of the design recommended by the Manager. No doubt you will if necessary instruct your Engineers to further discuss the question with Messrs. Rendel and Robertson, with a view to arriving at a design mutually acceptable, from which an experimental vehicle can be built at once as suggested.

I am etc.,

(Sgd.) H. Martin

for Crown Agents.

The Magadi Soda Co. Ltd. to Crown Agents.

London,

January, 1912.

(Recd. 11th. January)

Gentlemen,

We have the honour to acknowledge your E/283/7 dated the 5th. January with reference to the question of the design of waggons for the soda traffic on the Uganda Railway, enclosing copy of Mr. Currie's letter of 16th. November 1911, giving observations thereon.

We note that Mr. Currie does not agree with the design suggested by our Engineers, but prefers the design submitted by the Leeds Forge Company, subject to certain modifications. We have to state that our Engineers submitted a design at the request of your Engineers on the understanding that a self-discharging wagon was required and subject to Mr. Currie's stipulation that this self-discharging wagon should be capable of carrying ordinary goods as well as soda. A wagon built for this double purpose must necessarily be somewhat heavier than a wagon designed for one purpose.

With regard to paragraph 4 of Mr. Currie's letter of the 16th. November 1911, he states that, if the Leeds Forge wagon is used, the bulk of the soda will be self-discharging and that the remainder can easily be unloaded by hand. It is probable, however,

that

that not more than 60 per cent of the contents will be self-discharging, leaving 40 per cent to be worked by hand.

Mr. Currie then works out that the cost of this discharging by hand would amount to £520 per annum. We have to state that we do not agree with Mr. Currie's estimate of the cost of hand-discharging, but, even if his figure were doubled, the actual cost of the hand-discharging would not be a vital matter. What, however, we beg to point out to you is that it will be difficult, if not impossible, to obtain workmen who will discharge the soda from the interior of a wagen, owing to its light and powdery nature, and, even if men are obtainable, it will be at the risk of permanent injury to their health. It is for this reason that we have all along desired the use of a self-discharging wagen.

Mr. Currie states that the maximum amount of soda which we contemplate carrying under our contract is 160,000 tons per annum. Now it is quite true that this contract does not provide any conditions for the transportation of a greater quantity than 160,000 tons per annum, but during the negotiations on which the terms of the contract were agreed the probability of an increase of our yearly exports over the above figure was mentioned, and the representatives of His Majesty's Government gave us the assurance that if such occasion arose, His Majesty's Government would meet us in the fairest spirit.

As

As regards the filling, this can doubtless be arranged as mentioned by Mr. Currie.

With regard to having an experimental waggon built, we do not see what can be gained by loading same with fine sand, unless it is to test the general design of the waggon, but nothing would be gained by such a test with respect to the unloading of soda.

It seems to us that no more time should be lost in deciding this very important question, and we therefore hope that we shall soon hear from you that a design for a really self-discharging waggon has been approved, as we trust that we have, in the foregoing, made it quite clear that such a waggon will be essential.

We have etc.,

THE GADI SODA CO. LTD.

(Sgd.) J. Harwood Darton
Secretary.

Crown Agents to Messrs. Rendel & Robertson.

17th. January, 1912.

Gentlemen,

In continuation of our letter of the 9th. January we now transmit for your information a copy of the Magadi Soda Company's reply to our letter of the 5th. January with regard to the design of suitable wagons for the carriage of soda.

2. The Company, it will be seen, adhere to their contention that a really self-discharging wagon is essential to their interests.

3. We find in the contract no clause dealing with such a deadlock, and we propose therefore to refer the correspondence to the Colonial Office, where the contract was drawn up. Before doing so we shall be glad if any further observations you may be able to make on the subject to assist the Secretary of State in arriving at a decision as to the course to pursue.

I am, etc.,

(Sgd.) P. Ezechiel

for Crown Agents.

*2/20/12
Add to Robertson
section already open*

Messrs. Rendel & Robertson to Crown Agents.

18th. January, 1912.

Magadi Railway
Soda Wagons.

Gentlemen,

Your letter of 17th. January.

You will remember that in our letter to you of the 12th. October last we stated that we thought that a design submitted to us by Messrs. Livesey of which we forwarded a copy "might comply with the views of the "Authorities in Uganda".

2. If the papers on the subject are now to go to the Colonial Office we think it right to say that in our opinion the Uganda Authorities are rating too highly the disadvantages of this plan, and that it seems to us to satisfy in principle the requirements we are justified under the Contract in making.

Clause 37 of the Contract with the Company runs as follows:- "The Uganda Railway Administration shall "thenceforth (subject to the provisions of Clause 44) "until the determination of this Contract work and maintain "in working order the Railway and shall provide and maintain "all necessary rolling stock for the efficient working of "the Railway on the terms and subject to the provisions "hereinafter contained", and we find no other reference in the Contract to the subject. (Clause 44 does not seem to affect the case.) We are disposed to think that an Arbitrator would rule that the language of the clause

implies

implies that there will be a certain amount of "give and "take" in the working of it, and that his opinion would be that Messrs. Livesey's design though not altogether free from disadvantage to the Uganda Railway does not go beyond this reading of the clause.

3. The Uganda Administration go, in our opinion, too far in saying that they will have to haul "the dead "load of these wagons" 760 miles. All they will have really to do is to haul the difference between the weight of Livesey's and that of the ordinary wagon of our latest type. They cannot make a claim for the coal which they say they will no longer carry because that is a loss due to a contingency not provided for in the Contract, namely, the fact that the Soda Company propose to prepare their soda with oil instead of coal, which it seems to us they are perfectly entitled to do without giving the Uganda Railway a claim for compensation of any sort.

4. All that can be really alleged against Livesey's wagon is that it is somewhat heavier than our own - 11.5 tons against 10.3 - and has a smaller cubic capacity. The former is no doubt a disadvantage but not more than one ninth at the most of the disadvantage alleged, and it is by no means certain that the difference in capacity is of any importance, because the ~~management~~ admit that there will be a smaller traffic than they expected. In our opinion therefore the case comes fairly within the principle of "give and take" and we cannot but think that an Arbitrator would take the same view.

5. We advise therefore an acceptance of the wagon, (if pressed to do so) possibly enlarged to our latest

standard

standard or thereabouts if the management desire it, and of course covered. In respect to the length of the wagon we think that the Soda Company's views might be asked, though not necessarily accepted.

6. We should perhaps say that Messrs. Livesey's wagons are well suited to ordinary traffic. The flaps in the floor cover the open spaces in the floor when the wagon is used for ordinary goods, and form the slopes on which the soda lies when the wagon is engaged in that traffic. The slopes allow the soda to fall through the floor into the traps below it, and thence when the traps are opened into the ship or other receptacle. The arrangement is very ingenious, but as it may involve some difficulties in practice, it would be well, should the Soda Company press the use of the wagon, to provide that any special trouble or cost due to its use should fall on the Soda Company, and that they should have no claim against the Uganda Authorities for any loss or inconvenience which may be the result of the peculiarities of its construction. There can be no hardship in insisting on such a provision because an ordinary end or even side tip wagon would be less costly and quite as convenient for the soda trade as Messrs. Livesey's, their only disadvantage being that they require a lift and tip to enable them to discharge their contents.

Note that the loading and unloading of soda and soda products is to be done at the expense of the Contractors, which is perhaps why they do not propose the end tip wagon.

We are etc.,

(Sgd.) RENDEL & ROBERTSON.

C. a. / 3353 Sal

~~2c~~

sent 12.10 8.1/2

DRAFT.

Telegram
Governor
Nairobi

MINUTE.

- Mr. Parkinson 7/2
- Mr. Butler
- Mr. Fiddes 7/3. (GN 26919)
- Sir H. Just.
- Sir J. Anderson.
- Lord Emmott.
- Mr. Harcourt.

Your telegram of
unfatigued
10 August No. 1624
 soda
~~magadi~~ wagons
settlement of the question
sand heat.

not arrived at stop
angostores Silvergray

propose that you should
propudita seeking

endeavour to arrange
escortage

3/15

it

it with company

direct when you

come home

particulars

Chunopa

stop

silverway

you should

seeking

come furnished

fulgurites

with necessary

information
in ext rep.

Harcourt

Cap 3353 East



SAC

DRAFT. East No 85

Sr Sir P. G. in name

16 Feb 1912

MINUTE.

Mr. Parker 1/2

Mr. Boulder & Co.

Mr. Fiddle.

Sir H. Just.

Sir J. Anderson.

Lord Emmott.

Mr. Harcourt.

di.

Minutes known to confirm
my telegram of the 8th of February

which read as follows:-

" Your telegram of 10 August 1911
162 ^{soda} ~~hydro~~ wagon

settlement of the question
not arrived at stop propose
that you should endeavour
to arrange it with Company
direct when you come
home

Mon. a. 1 Feb.
(keep these papers)
(copy date 5/10/11)
3353 + 1824 (part 5)
(3353)

5/10/11

home stop you
should come furnished
with necessary info

2. In this connexion,
I have to transmit to you
a copy of a letter from
and of suit of
the C. d. for the Cols. ~~with~~ ~~it~~
enclosures as are not already
on record in the file

REPLY TO BE MADE

Gov/3353/2012

~~S2C~~

S.P.
C. d. for the Cols.

10 Feb 1912.

Gent.
I am etc. to ack: the receipt
of your letter E/283/19 of
the 15th of February on
the subject of the wagons for
the ~~Magadi~~ ~~road~~ ~~traffic~~ ~~on~~ ~~the~~ ~~Lake~~
~~Magadi~~ ~~Railway~~,
to ~~the~~ ~~effect~~ ~~that~~ ~~he~~ ~~has~~
informed ~~by~~ ~~telegraph~~ ~~to~~ ~~the~~ ~~Gov.~~ ~~of~~ ~~the~~
Gov. ~~to~~ ~~the~~ ~~effect~~ ~~that~~ ~~no~~
settlement of the question has
been arrived at, that it is
proposed that ~~he~~ ~~be~~ ~~appointed~~
not

Recd 7/2
hid Brother 8/3.

S.P.