TRN/LAN/3#18

C.S.

PUELIC WOFKS.
(Roads)

No. 76/38.

19 38.

M.E. the Governor.

SUBJECT.

1938.

11th April.

Previous Paper.

Construction of tracks to the Camp :-

His Excellency the Governor requests information regarding cost of, etc.

MINUTES.

Minute from H.E. the Governor to Mon. Col. Sec. 7. 4. 38.

DP. Whr. Will you thinkly farmish the information called for by the.

MCH.

Hon; Col Sec,

The cost of the Tracks was as follows :-

South Track. Common gate to Pony's Pass

approximately

£1672 per mile.

North Track. Wireless Station to Two Sisters approximately £1584 per mile.

Canopus Track. (not yet completed) £1408 per mile.

The distance from Pony's Pass to Fitzroy = 16 miles.

: Two Siaters gate to Tar Barrel Rincon, Estancia. = $11\frac{1}{2}$ miles.

Subsequent Paper.

The cost of the extension of the North and South tracks under existing conditions would be £1640 per mile

/made

made up as follows :-

1 mile of road, clear, hardcore, metal blind & drain.

£1584.

Bridge 1 stream, say one to each mile, 10 ft @ £1 ft

10

Provision for accomodation and plant.

Tractor,	crusher and trailers.	£1000)miles	
Portable	Cook-house.	75	27½ say	46
: 1	Sleeping Quarters.	150	£1275	
: :	Office & quarters for Ganger.	50)	
		£1275		

Total per mile.

You will understand that the cost of the work would largely depend on the supervision available, it is extremely doubtful whether a suitable independent ganger is available locally.

Director of Public Works. 29th April, 1938.

I have discussed this with the D. P.W.

His experience of road waking here selled which constitutes him as far the bosh authority in the matter make his estimates incontravilible. There has been in the part and continues to be a great deal of love talk about the obligation on the Swemment of creticity metalled words. Mr. Roberts is emphabitially of opinion that the unh

it is not an economical proposition from

any point of view and I see in preson for to

deffer from him. 2. I propose to make at a reasoned case for the view at presente taken by havenment and to give critico such as her George Bonne an opportunity of reflying to it. We want to deal with hard facts in the place of any theoretical values. 3. Tuo maller require elucidation for the case to be prefaced. " " It is alleged to the (1) les That the estimates of cut as quen herein are Extravagant In! Roberts has Explained & we that some saving nay £ 100 a will et work night be wade by oblamy the service of a flagued vous foremen from the U. K. Then remains the puller que his of lighter con buchin It is waster to talk about the rabue of roads for wheeled hafter when they can carry wer any perior (with maintenance) a fair roturne of haffic in clasing lorsies I not les than 3 has wight. I can ochis fied that the frundalin and wettalling war goff camp call

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employed. It is not shewn in 258/32 that ribbon back were frand after full tapenince un make and that the centre had to hear in photos recop () w (2) is that file had he be filled in with metal. I would like some and information of W. an that outfict to be included in his report called for by this windle (2) It is said fuller that though the Carl of carrying a melalle row through soft camp may be \$ 1600 a will yet the major postion of sous in alling required in this Clony would be in how couch where the cut well be very small. It affect to be almost assumed that it is neficient to cut of the by sois and make a notion was at a cert of same such amont as a few forms a with. Lave motored are to called tack when this has been hied and one not only not farmely in presed but am of the belief that withing but metaller voed. with proper fundaling will afford the service required. I will be par of the D.T. W. will enfer his opinion and will also extincte the Cert of war waking wer haw comp Ulle 76/380

Sheet No.....

Deveiter Public Works.

In your opanion and estimates please as required by It. the Governor.

If It. the hotel 2.6.38

Hon; Colonial Secretary.

With reference to His Excellency's minute dated the 2nd of June, 1938, regarding road making in the Falkland Islands, I beg to submit the foldowing report:-

The estimates which I have given are based on 16 years experience in the Colony; the work which has so far been carried out has not been left to others; each section of road has received my personal attention.

I am satisfied that the figures which I have quoted are in no way extravagant, that is if the work is to be done properly. It is true that a saving of approximately £100 per mile might be saved by engaging an independent road ganger of the proper type, but it is questionable when taking into consideration the cost of salary, passages, etc, which would have to go against the cost of the work, whether it would be justified.

When discussing roads with some of the farmers it has been said; - "All that is required is a few lumps knocked off and a few holes filling, with a little drainage here and there so that a car can get over it". I submit that this is a fallacy; such statements can be entirely ignored. I have surveyed most of the usual routes to the farms on the East Falklands in a six-wheele 30 cwt lorry fitted with creeper tracks, also in a specially constructed 24 H.P. Ford car fitted with over-size tyres and chains, and nowhere have I seen camp

/which

which when treated as suggested would allow a car to take the same wheel track more than about twice.

It is only the knitted roots of the grass in the top sod that holds the vehicle up, once this is broken and the same track is taken the vehicle will sink through the peat to the solid.

It has been said by many that when the top sod is only a foot or so deep one can make a good track by stripping this off and exposing the clay; this has been done on some of the farms and I have travelled over these tracks. From the experience gained I am of opinion that they are all right for a light vehicle when the weather conditions are favourable, but in bad weather or after rain (which is fairly frequent they are a sorry job, they are greasy, full of ruts and potholes and would in no way be suitable for a lorry or heavy car traffic.

To make a road which will be of any use in the Colony, one would wherever possible avoid deep peat banks. The site of the road should be sited where there is not more than a foot to one foot, six inches of peat, the top sod must be removed, the subsoil be well drained, and drainage trenches be cut on the high side of the land through which the road runs. A mattress of rock from eight to nine inches in thickness must be put on the clay, this should receive from three to four inches of broken stone or gravel, finally it should have a dressing of binding material such as can be found in clay banks along the track, and then be consolidated with a ton roller. After much consideration and experience I am convinced that this is the only practical method to adopt.

The cost of making such a road is approximately £1640 per mile. With regard to forming roads over hard camp it will first be necessary to define hard camp as follows:-

- (a) Where clay is found within six inches of the surface.
- (b) Where stone runs are encountered.

With regard to (a) such camp is not encountered until one leaves

Stanley some 15 miles begind. Taking the usual camp tracks right through
the East Falklands, I should say that a fair estimate would be 40%
hard camp as defined at (a) and 10% stone run as defined at (b)

there would on (a) be a saving of labour, in so far as it would not be
necessary to excavate the top sod, but on such camp it would still be



necessary to provide the foundation, metal, blinding and drainage.

In the case of (b) where stone runs are encountered there would also be a saving mostly on the transport of rock and labour in drain cutting, for here one could get natural drainage. The method to be adopted here would be to level the surface by breaking down the rocks and finishing off with shingle and blinding in the ordinary way. I estimate the saving per mile to be as follows:

In the case of (a)

1760 yds x 4 yds x 1/3 yd, = 2347 cu yds.

less work excavating & clearing at 1/- per yard. = £117. 7. 0

making the estimated cost of

road over hard camp (a) = £1522.13. 0

instead of £1640. 0. 0

In the case of (b)

1760 yds x 4 yds x 1/4 yd = 1760 cu yds.

less work in transporting rock

and drainage valued at say 5/-

per cu yd. = £440. 0. 0

making the estimated cost of

road through stone runs (b) = £1200. 0. 0

instead of £1640. 0. 0

Taking as an example the $27\frac{1}{2}$ miles which is the distance from Stanley to Fitzroy and the Estancia and reckoning on 40% being hard camp and 10% being stone runs (this is a liberal estimate) the cost of this section would work out at:-

50% of $27\frac{1}{2}$ miles = $13\frac{3}{4}$ @ £1640 per mile = 22550. 0. 0

 $40\% \text{ of } 27\frac{1}{2} \text{ miles} = 11 \text{ @£1522.} 13.0 : = 16749.} 3.0$

10% Of $27\frac{1}{2}$ miles = $2\frac{3}{4}$ @£1200 per mile = 3300. 0.0

 $27\frac{1}{2} \text{ miles} = £ 42599. 0.0$

or an average of £1549. 1. 2 per mile.

Two cheaper kinds of tracks have been tried; one was constructed by forming two strips or ribbons each about two feet wide with flat rocks laid in the form of Grazy paving. This was done on the recommendation of the Hon G. J. Felton, a length of 150 yards run was laid down in the vicinity of Sapper Hill and it was tested but only stood up to approximately 100 vehicles passing over it, the slabs tilted and settled badly and many were thrown clear of the wheel tracks. The Hon G. Bonner and G. J. Felton inspected this and agreed it was a failure.

The second type laid down was known as the ribbon track which is referred to and illustrated in M.P. 258/32. I had seen an article in a journal describing this type and was at the time, of the opinion that it would suit conditions here, consequently in 1932 about one mile was laid down from the Common gate to Sapper Hill and it stood up very well for some months, but on the traffic to the peat bogs increasing consequent on the construction of the track it was found that the walls of the trenches which were formed in peat, gave way under the weight with the result that the tracks spread and consequently settled. The centre portion was then dug out and filled in with rubble and the whole road strengthened. Thereafter track or road construction reverted to the orthowork method, that is by excavating the full width to solid and laying down a solid mattress etc, as previously explained.

Director of Public Works. 10th June, 1938.

Munde for AE. the Governor 7/6/38 2.

I from S.P. W. 11/6/38 3.

Submilled by CS. with we will in

wad & Saffer Will from - now Entracted

13/6

HO

The Roberto' excellent report will be the basis of a memoradum which I am preparing a the question of the policy of making hoads through the camp. I would like connected plan to be attached when this is returned.

A the following possible: -

(1) Ither is at the difference accommended for believe the fixor the fixor per unite being the cost of the Campus back and the f 15'22 which is the estimates and over hard cauch

mumber in a year of full lime working days paid for by Sw! in Excen of actual requirements better as a result of the poticy of finding work I part and whole time I to give lumpley ment.

The Q. Q. is in the best proling to work out number (2). In order to make this more clear It it way

Muse Exp.
by Sar in
roads and
hilfer in
private property
and carbidation
made by
owners.

be stated that the object is to ascertain the reply to the criticism that if the agricultural Department was here mechanized a number of workers for whom employment is how from for a part or the whole of the year could be dispensed with and with us were Expendition they could be kept at work in the roads. It is obvious that he road making at a distance from Stanley It is essential that every man physically bulling capable of pulling in 45 hours steady work a week. The a.a. can firsibly arrive at The reply with the greatest accuracy by laking every wan in his list individe ally and separately and seems how many of there with When his Department carlo dispense when he has his wachinery would be fit for was work and for how many months in the year. Two further factors are to be taken into consideration (a) The number when the leading wow by is in operation and when it is not and (b) The much thetaile to of able lived men who can be dispensed with when Public Works are reduced from present humbers to sufficient for maintenance upkel and mina works deligacetalice works of which total

Sheet 5

With you Kindly formish the information called for in (1) of 49:, minute and in marginal note, also the information required under (4).

McH
14.6.58

Hon; Col Sec,

Submitted, with reference to (1) the difference in cost between the Canopus track and a road over hard camp of £114 per mile, is accounted for in the former case by not having to provide buildings for accomodation of the men, and by close proximity of the beach and ridges of rock to the site of the track, from which a certain amount of shingle and rock is obtained, necessitating less labour and · transport than that required for work in open country over hard camp.

Marginal note on sheet 4.

During the last thirteen years the following expenditure has been incurred on roads and bridges on private property, as detailed overleaf, :--

Year.	Work.	Owner of land.	Cost to farmer.	Cost to Govt.	Remarks.
1925	Bridge over Murrel River.	F. I. Co.	10. 0. 0	55. 0. 0	£10 is for labour supplied by the Hon; G.J.Felton.
1928.	Malo River Bridge.	Hon G.J.Felto	n Nil	1620. 0. 0	Work carried out entirely by Govt.
1928.	Chartres River Bridge.	Hon W.Luxton.	Nil	940.0.0	- do -
1932.	Swan Inlet Bridge	F. I. Co.	93.10.11	120. 0. 0	Work carried out by F. I. Co.
1932	Antiojo Bridge.	F. I. Co.	40.13. 1	60.0.0	- do -
1933.	Cutting track from Fitzroy to Mount Pleasant.	F. I. Co.	105. 0. 0	105. 0. 0	Work carried out by F. I. Co. £105 represents subsidy of half- cost of 15 miles @ £14 mile.
1934	Fitzroy River	F. I. Co.	400.0.0	400. 0. 0	Work carried out by F.I.Co, with
1935)	Bridge.	1. 1. 00.	400. O. O	۱,00. 0. 0	second hand mater ials obtained fro hulks in Stanley.
1936.	Murrel River Bridge.	F. I. Co	Nil	200. 0. 0	Work carried out by Government.
1937•	Improvements to Estancia track.	F. I. Co.	Nil.	140. 0. 0	- do -
1938	- do -	F. I. Co.	Nil	100. 0. 0	- do -

2. With regard to (b) fourteen able bodied men is the maximum number that can be dispersed with when the Public Works are reduced from the present number, sufficient for maintenance, upkeep and minor works. A list of men required with details of their duties will be furnished in the near future with the draft estimate for 1939.

£ 1049. 4. 0 4040. 0. 0

Totals.

Director of Public Works.
16th June 1938.

Agrin: Advisor.

Los necessary action

please on para's (2) and

(a) of He's univer of

(4. 6. 38.

Mett

Col.

16, 6, 56

Hon Colonial Secretary,

I have the honour to submit, the use of surplus labour for road making would I think be governed considerably by when most of this labour would be available. The most suitable time, perhaps the only time when roadmaking could be carried on to advantage, is during the summer period from October to April, and it is during this period that whaling, farming, and other seasonal work absorb practically the whole of the able bodied labour.

This was so anyway during this period 1937/38, when the Agricultural Department's weekly employment list, exclusive of foreman and truck driver, averaged only sixteen, these all being more or less unfit for some reasonfor other work.

In April the whaling men returned and there is the usual influx of seasonal farm hands who have been dispensed with for the winter.

During the inclement period May/October this Department has to provide its greatest number of days employment, while the actual peak period is July / September.

By far the greatest part of the work provided by Government therefore has to be put in hand during the period which is most unprofitable to any employer of

of labour.

The assistance of machinery would not affect this

Departments capacity for employing labour so long as mone;

was available. Work would proceed more quickly, but

large numbers could be kept busy planting tussac and

sand grass, and on other improvement of lands in and

around Stanley for some years to come.

Were it found to be of more advantage to the Colony to employ some of the surplus labour on roadmaking, this Department could most economically deal with its programme with twelve selected men in addition to foreman etc.

In the summer months however, the number of employed exceeds this only by four, and in most cases as has been said, the ones employed would not be worth much on roadmaking.

It is estimated that in the period May-October this year, this Department could dispense with an average number of thirty-five men besides the twelve already lent to the Public Works Department.

A total of forty-seven able bodied men who could be used for roadmaking in the Camp in winter time. This would amount to 6721 days of employment this year when the Sealing Company is not operating.

The Sealing Company, if working this year, would have used labout which we are having to employ, to the extent of 1600 days work, leaving 5121 days of employment available for road work.

I note that the Public Works Department may dispense with fourteen of its men at some future date and these would perhaps be suitable for road work also.

Agricultural Adviser. 8th July, 1938.

Sheet No. 7... Submitted In the hand a good deal of wand work has been done during the months of writer. In a hormal Season there is not a grear deal of stoppage du to weather conditions. I wish to have 4 cipies of Mr. Roberts' minutes of 29. april, 10. June and 16. June (except para 2) The copy ohnew to header hundles by Diech of Public Wake a cost of Notes haking in the Colony. The datis of the unimales should be from in the margin of the city tittle 16 July 50

Copies Sabinities.

Will you please have hos letters differ for my signature as in the draft allached. One should be addressed to het bearge Burner and the

other to his Norman Cameron . Kill Httt 22/7/30 netters to George Donner Esq. and Han Norman 2 - 4. Letters Submitted.

Met!
26, 7. 58 Thanky -All 30/7/35 36/7/38 Mainute from W. P. W. of 19. 9.38. Report Submitted. thet 21/9 Mainte from 10. P. W. of 24. 10. 38. Submitted.

Mchi

25. x. 88

12p. looks Is the Construction of magazine at Sapper Hill proceeding? her 26, X. 58 Low bot See. Excavating for the building has been going forward for the past. the site meessitates a harge amount. of blasting & quarrying Leyenan . 26/10/38.

B. U. 7. X1. 18 Mill. 27. X. 58

DP. WKs

How is the work proceeding?

The H.J.

XI. 18

How bob Sec. The required outh for the work on her base wow going forward. 12/1/38. 14. 5%

Letter from George Benner, Esq. of 27.10.38. 6-8. : Yr. Internation. 23. K1. 58 a letter from his tellen is also put up. It seems h. make out the best case posible but is of little assistance as he cays that he knows withing of finance and he is unable to counter the Cut a trinales. The fallacy that because wads have been made in or through sparsely figuraled Construe elsewhere there for it can be done here ignores the work timp whant faction. Then could best be illustrated by citing one actual parallel example. I come to Concert of the Existence of any Mily such parallel or an approximation to it. I admit at the same time that if a few hundred thurs and pound and

be vaired by economie in other direction or increased laxalian it might benefit absenter landowners, and part of the County benefit would ultimately accuse to the City general Community

Please relieve when her dellars little has been refished

Sheet No. 9.

Letter registered and file returned.

Method
5. FA. 56 mm 10/1/31

(4) Letter from Surritary, J. J. R. L. of 14/1/39.

The Submitted. apparents the League has no idea of the cost is where the money is to come from as the rate of time taken over the word when many years to reach Camp

19.1.59 149. Shoken. Lund usual fruited acknowledgment. hull 20, 1. sq.

15. Letter la Secry Reform feague. 20/139.

B. U. 26. 1. 36

mett. 20. 1. 36

The returned.

Inch! 76, 1. 59 With dealt of letter for R1. tttt/26/1/39 The Submitted in draft. mess 39 Thanks . Letter to issue as anews 11111 27/1/29 Ketter to Secretary, F.I.R.L., of 27.1.39. 16-19. Letter from Sec. J. S. L. L. of 18/4/39 Letter to Sec. J. S. R. L. of 28/4/29. D. P. Was In your observations please. MeH 28. 4. Jq.

1

Hon Col Sec,

The average cost of existing camp roads is approx 18/6 yard run x 4 yards wide. At the commencement of these works it was necessary to have cook-house and sheds all of which were included in the cost of the roads.

- 2. The North Camp road is a good sample of Falklands ground, as clay, peat, swamp and rock was encountered on that section and it is on that road that I would base an estimate.
- 3. Knowing the work involved, transport necessary, replacement of machinery wear, losses by weather &c, I am confident that a road suitable for lorry traffic could not be made for less than 17/6 yard or approximately £1500 a mile, and then only if worked from a depot on the site, with Stanley as headquarters the cost would be considerably more on account of time lost on conveyance, morning and evening.

0.i.c. Public Works Dept.

Letter from Reform League.

No down the work count he down cheaper of contract. This down that he are has been proved with pear tuting.

Latting. Met 20,5°.59.

I do not wish the art of wash with a same line was will come I suppose.

A sum can be set down provided in the 1540 by him als for the construction of an in its of metalled a sand of the construction of an in its of metalled that the construction of an in its of metalled that the construction of an in its of metalled that the construction of an in its of metalled that the construction of an in its of metalled that the construction of an in its of metalled that the construction of an in its of metalled that the construction of an in its of metalled that the construction of an in its of metalled that the construction of an in its of metalled that the construction of an in its of metalled that the construction of an in its of metalled that the construction of an in its of metalled that the construction of an in its of metalled that the construction of an in its of metalled that the construction of an in its of metalled that the construction of an in its of metalled that the construction of an in its of metalled that the construction of an in its of metalled that the construction of the const

L'ette to Sec. J. S. R. L. of 22/5/29. (22) DP. Wills To note. Inct of Ilon look See. 16. 1 59 Moter, for molecusion in 1940 Estimate. IX. 23/0729 Ketter from Secretary, Stanley, Sec. 14/19 (23) Submitted. Compandence . with the herque on the subject of roads is in this file. With the present revenue there appears little Lope of finding funds
for wads under hy increased
lascation. Provision for wads
under Works betray had to be
Cur our to provide for the
ligite. Dept. MCH 12.). 19 Will you please refly that I will be very plad to meet the defutation at 11 oran no Tues day wext 18. unt meanwhile will yo fleare bave para 2. If the letter to the Leapur excertful and have deputation a copy of the furcase. On also send up

please a vinite Except es

marked for pero 4-2 and a

copy of the septy of the Steer annex

anorialism

thether 13/7/35

P. S. I w. like 2 chie of each

of the excepts.

P. M. I also wish to know

the present buileaf of words in

and out of Normely maintained by

the P.W. D. I am I think

rept is say in that the Deferment

w. like at least of 3000 a year for

maintinance of foreithe

24. Letter to Rev. G. K. Lowe of 13. 7.39.

M. C. P.W.D.

In information regument

for the blease. I sent your

a note about this today.

Methy

14. 7. 59

Hon; Col Sec, There is 531 chains = approx 7 miles of surface dressed roads in Stanley, and 194 miles of metalled roads leading outwards, comp:-North and South Camp roads and Surf Bay Rd 153 miles, roads on Common. 31 miles. 0.i.c/P. W. Dept. 15/7/39. I. Copies in deplicate herewith. 2. The Deputation will The me II a. a. tomorrow Thankyon The defulation were fire the fullest posible infor water and a copy of the letter to the R. 7. and that to the theef ares. They had no supertiens b make i face dil. he kellman is prefaming a liste. of the wilewiew which will be sent to the the 18/7 S.h.C. Mi Lellman, Ot. C. P. wills Deht. the notes known in this pape. mest (18.).59. Note of interior herwith How bot Sec.

M. Notes Submitted In col 2i-7. -19 In sewling the wolf as anne will you please very that since & meeting the deputation, my attention has ben called to the cert of road making in hyland. The Civil Engineers Cost Book (1931 Edilin) lays down that the cost of making light wads a private estates is 6 s. to So. per yours super. For a the sound the cost is therefore the entire of the cost of maintenant of words in much desired higher higher in \$. 150 1 \$ 300 a he ile per anne. To complete the was to Estancia al a ent of £ 1500 a unite (v £ 140 a below the estimate of he. Roberts! it for a you, if it could be waithing et frankle the love of the citemen tittet 24/7/39 interpent.

Jo note.

25. 7. 39.

Hombon Sec.

Moter 4. gl. 26/7/37.

8a-36/4/4. BM21/7/84

There is I believe correspondence in file - for ithy completed heft. - in addition to the feeter you have and me regarding the austraction of teaches to the camp. There was correspondence with the CA. a the kind of was that would be suitable. I would like to see all for.

2. I also wish to know the actual the particle of also wish to know the actual the

2. I also wish to know the actual the contract of the how roads to the views station to dur Sisters and (b) from the common felt of the end of the hoster was housed Fitzing (c) the road now being construction to the Campus that

3. (a) + (b) above were particularly colly I believe owing to labour difficulties at the time. The D. P. W. carl putatly say what the calaisin of these wads would cost per wide under present taking endiance I wish to be unformed of the distance wereing to be sun to tiling and the Estance.

ttttt 7/4/38

COVERNMENT HOUSE,

STATILEY.

25th July, 1938.

X

Two or three of the leading farmers, including yourself, have from time urged upon Government the desirability of constructing roads through the camp in the East and West Falklands.

The question of whether or not the Government should adopt a policy of road construction is dependent on the replies to the following questions to which I would ask in all courtesy specific answers and not vague generalisations:-

(a) What are the precise advantages which would accrue to the Colony in return for the heavy expenditure entailed in building roads for passenger traffic?

As no one has yet suggested heavy roads for freight now transported by sea, such roads are not under consideration.

(b) How could the building of roads through privately owned property be financed?

It is quite clear that the reply to (a) must detail advantages which will be commensurate with the expenditure, whether the returns are direct or indirect.

One of the difficulties in replying to the more or less severe criticisms momen of the Government for not proceeding with road building is that the critics either ignore the question of expenditure or regard with scorn the estimates prepared by the qualified advisers of the Government.

There are now attached to this letter copies of three minutes from the Director of Public Works giving in/

(3)

in detail estimates of cost based on the experience of many years. I am inclined to criticize the estimates personally but solely on the ground that the cost seems on the low side as it is little more than half that of motor roads constructed by other Colonial Governments in countries where labour is cheap.

The completion of the roads to the Estancia and to Darwin via Fitzroy may be taken as a criterion for consideration of the advisability of a road policy. The cost of the work would be not less than £100,000. The interest on this sum cannot be taken at less than £5000 a year and the cost of maintenance of the road after construction would be not less than 5% of the capital or a further £5000 a year. The total mileage of roads in the Mast Falklands alone to do equal justice to all would not on estimates of distance prepared by the Director of Public Works be less than 264 miles which could be made at a cost of £396,000, leaving the West Falklands untouched.

It may be argued that steady progress of a few miles each year would be justified - say ten miles at a cost of \$15,000 a year. It has been suggested that the surplus labour in Stanley now employed by the Agricultural Department might be utilized for roadwork instead of being employed in extending the sand grass and tussac plantations in the neighbourhood of Stanley. The position of the labour market is that during the period from October to April, the only time when roadmaking can be carried on at any distance from Stanley to advantage, whaling, farming and other seasonal work absorb practically the whole of the able bodied labour available. The extended use of machinery by the Agricultural Department would not have an appreciable effect/

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effect on the number of men, 12 to 16, employed in the summer season. In any event the total expenditure on the wages for surplus labour during the winter is not ordinarily more than \$1600 in any year.

The question then remains as to how £10,000 to £15,000 could be found annually without additional taxation and what the concrete advantages to the community would be in return for the expenditure.

It has been suggested that the population of the camp generally - for whom the roads would be useless for riding - would benefit materially by the improvement in communications. Four directions in which such benefit would accrue have been mentioned:-

- (a) Dairy and garden produce could be marketed in Stanley. The Town can of course raise its own products of this nature. They are at present in competition with imports from South America, when not raised for domestic use. It is at least doubtful whether the camp could compete unless imports were controlled and the cost of living increased
- (b) Medical Services would be available more quickly. If that were the object one or two seaplanes would be far more economical than road building.
- (c) Education facilities for the camp children would be improved. This point is difficult to follow. Other countries with the same educational problem for scattered settlements have with all their roads found that education by correspondence shows the best results.
- (d) The minds of the people in the camp and their outlook would be broadened by better communications with Stanley. Few farmers would it may be allowed concede that any advantage would lie in this direction.

mil

(It is requested that, in any reference to this minute, the above Number and the date may be quoted.)

From Officer-in-charge.

Public Works Dept.

MINUTE.

2lith October. 1938.

To The Honourable,

Colonial Secretary.

(M.P. 76/38)

Hon; Colonial Secretary,

Stanley, Falkland Islands.

Submitted.

Magazine and embrasure. Canopus gun site.

These works were completed on the 20th inst, cordite and shells are being placed in today, after which the keys will be passed to the O/C Defence Force

Road to Sapper Hill.

This road is now completed and some of the men engaged thereon have been released for whaling work.

The splinter-proof hut to accomodate gun's crew is nearing completion and should be ready for occupation in about one weeks time.

O.i.c Public Works Dept.

61 Gracechurch St.

London. E.C.3

His Excellency,

Sir H. Henniker-Heaton K.C.M.G. Falkland Islands.

27. Och. 1938.

Dear Sir, "Road Construction East and West Falklands."

In further reply to your letter of the 25th. July, I have advocated "Track Construction" through the camp in the Is-

lands for many years, not metalled roads.

By this I mean... General improvement of recognised tracks- by draining all swampy places or peat bogs and erecting small Bridges over streams, suitable for a light Motor Car to pass over.

I think the people who live in the Camps are entitled to this consideration from the Government, to enable them to travel about more easily and with less danger to themselves and the ponies on which they ride.

More especially when they are compelled to take long journeys, when streams are flooded and almost impassible, and the tracks are just one quagmire, through which these brave little

ponies wend their weary way.

Those of us who have experienced these difficulties of travelling know what a relief it is to be able to say, towards the end of a long and difficult ride. "We are all right now, there are bridges over most of the streams for the remainder of the journey; or, "there are no more bad passes to get thro"."

The wonder is that the ponies do not break their legs

or that the riders come through unscathed.

This is the experience of most shepherds and camp men whose work often necessitates them taking these risks.

Is there any further need to state what the advantage of a bridge or a decently made track would mean to

the Colony ?

We do not want roads on which it is impossible to ride, and the metalled roads I saw in 1934-35 were too rough for any ordinary Motor Car and quite useless for riding purposes, as they would have lamed any horse in a (few minutes.

(b) The Track Construction through any parts of the Islands should be financed by the Government, as these tracks are for the general use of the people in the Colony and not for any particular Farm.

The present Annual Expenditure for the Colony is unnecessarily high, and should include a suitable estimated sum for track construction, without any further Taxation being needed.

The Sheep Farming Industry is the BackBone of the

Colony and why should it be crippled by further Taxation;

The Estimates, for Road Construction, prepared by the Advisers to the Government are quite beyond consideration or the



capabilities of the Colony.

The benefits which would accrue from the improved Communications, would be, that those living in the outlying places would have some chance of an occasional change, which is almost impossible under present conditions, and they would also have the assurance that help could be obtained if required in cases of illness, and the possible necessity of being removed to the Hospital in Stanley.

It is only because the average Falkland Islander is a strong fellow, and lives a healthy life, that the Colony is, what it is, to-day.

I do not consider that the advantages should be commensurate with the expenditure in this case ,as it is the duty of the Government to provide the convenience.

Education facilities, in my opinion are best served by a regular visiting Schoolmaster.

We may some day be able to have a seaplane, but not under present conditions, they can be very expensime hobbies.

I enclose a copy of a memorandum I received from $\mbox{Nr.}$ Young, nobody else has replied to me.

I have the honour to be, Sir,

Your obedient servant,

Good Bonnes

Memorandum Re His Excellency's letter dated 25th. July,1938. addressed to G.Bonner.

With reference to queries A.and.B.

I see no advantages which would accrue to the Colony in return for the heavy expenditure entailed in building roads, and would do all in my power to oppose the expenditure of the large sums of money which would be required if it was seriously proposed to proceed with such a project.

The only road for which there might be some possible justification is one from Stanley to the nearest harbour in the Falkland Sound and so improve communications with the West Falklands but this too would be altogether too costly.

There can be no obligation on Government to build roads to any particular Station which principle must surely be common to all Governments. It is so obvious that I do not think it needs stressing

With reference to the possible benefits referred to on page 3 of His Excellency's letter.

A. Stanley could raise all the dairy and garden produce it requires if it wished to do so.

A certain quantity is raised now and even if efforts were made to make the Colony self-supporting the additional quantity required is small.

I doubt whether Stanley could be kept supplied with Falkland Islands produce milk, butter and eggs all the year round at an economic price.

- B. Medical Services. I am strongly of opinion that a sea or air plane is the best solution of this question.
- C. Educational Facilities.

 Even if roads were available, children would have to come into Stanley as boardwrs.

 This could be done with present means of transport but parents have shown no great interest in proposals of this nature.
 - D. This expression of opinion is too general. It requires amplifying and it can then be answered.

I doubt exceedingly whether a case can be made out.

Finally, it must be remembered that all dwellers in the Falk-land Islands including the Farmers and the Farm Workers live in an outpost, which fact is apt to be lost sight of. Both the Farmer and the Farm Worker derive some benefit from that fact and this surely must be offset against the lack of those amenities which are taken for granted in more sophisticated countries.

Signed.

L.W.H.Young.

London. 7th. October. 1938.

(2)

16th November, 1938.

Dear Sir Herbert,

I thank you for your letter dated the 25th July,1938, in connection with the construction of roads through the camp, which owing to my absence from the Colony and pressure of work since my return, I have been unable to reply to sooner.

I would now express my further views as follows:-

(a) Roads through the camp would mainly benefit the inhabitants in comfort and cheapness in travelling.

Stanley people who cannot afford a trip abroad, (which seems so necessary for Government Officials) would have a better opportunity of visiting the camp.

More children too would be enabled to have a change of surroundings which is proved so beneficial by the improvement in the few children who get to the camp for their summer holiday, - very likely much more useful than the Nutrition stunt.

A change would also be afforded to the workers and their families in the camp, which, I feel sure would be an inducement to men to work in the camps. The isolation of some farms, the difficulty and expense of moving

His Excellency

Sir Herbert Henniker-Heaton, K.C.M.G.

Government House,

Stanley.



moving is most certainly the cause of the difficulty in getting labour for the camp.

Camp roads are a need for the people as is shown in Stanley now by the number of cars and cycles in use on the few miles of existing roads. With more roads, cars would be imported by the hundred and practically every worker in the camp would be the proud possessor of a motor cycle.

Produce from the farms would improve the variety of foodstuffs in Stanley; Fork, Poultry, Geese, Lamb, Beef, Fish and Dairy Products would all be available.

Medical service would be easily available to the farms if the Doctors could travel in comfort. It is not so likely that the farms would be called upon to pay up to £100. for a vessel to take serious cases to Hospital.

Personally, I doubt whether Seaplanes would be more economical than roads.

Surely the humane treatment of farm workers in need of medical or surgical aid is worth considerable expense.

Were the roads extended; mails could be delivered quicker and fresh fruit would be easier to procure, which latter, according to the Senior Medical Officer, is an essential for health.

(b) I do not think the running of roads through any privately owned property would add to the cost. All owners would surely welcome a road, except, perhaps, the Falkland Islands Co., Ltd. who would lose passenger fares and parcels freight, but as their charges are so exorbitant



exorbitant the more reason for the road.

Have the Falkland Islands Co., Ltd. given any indication that they would object to a road through the Estancia camp? (I believe they have for a road to Darwin).

I don't suppose the roads can ever bring in revenue in any proportion to cost, but do roads ever in sparcely populated countries? Surely thousands of miles of roads are made in other parts of the world connecting villages which can bring in very little revenue.

Almost all large public works never do produce much in the way of revenue if put on a cash basis (vise Agricultural Department and Stanley Improvement Scheme), but are a return on taxes for the amenities of life which is a vital necessity in this Colony.

You say you are inclined to think that the cost of the roads built is low. I, personally, and many others, say it is extremely high as they were built by hand with the aid of one horse and cart and fit and unfit men who were not pretending to work, but just filling in time instead of drawing dole. (For instance; While Acting Governor, Mr J.M.Ellis went to see the men working and found them playing football with a tin. The game was not stopped during the time he was present and he dared not remonstrate with the men. One man was discharged for reading a newspaper behind a rock during working hours, but on threatening to 'punch the Boss's head" he was reinstated with and increase of wages at the rate of ld. per hour.)

9

I do not admit we had man with sufficient knowledge of road building and he certainly could not handle men. I cannot, therefore, accept figures as to cost.

The roads under discussion are for car and passenger traffic and not for 30-cwt. lorries with loads. The Stanley roads were originally built directly on the peat and carried the ordinary cart traffic.

The minds of the people are already broadened by education, more particularly by wireless and travel and it is for this reason they are not content to be isolated on some of the out of the way farms without means of getting away, and you and I must admit we should be the same. I am of opinion that the labour question in the camp will become more acute and this not for any reason in connection with wages.

I do not know anything regarding the finance part of the question. I had an aide that the £50,000. odd shown as Surplus Balance meant something belonging to us as tax payers, but when I enquired at a meeting of the Sheep Owners Association in London if that amount could be spent on roads, I was told by the Chairman, Mr Bonner, that the £50,000. meant nothing and it was only figures on a piece of paper.

So, as I say, I know nothing about finance, but I do know that other Countries have roads and pleanty of them, and that these Countries have not the resources at their command as has this Colony.

Yours sincerely, (sgd.) G.J.Felton.

76/38

Standay 14 17 Tannary 39

Sin

The wender of The F. I. Reform League desire one to acquish the Excellency of Their Views regarding The Campo rooks.

In The first place They Counide it deplorable That These trado have been stopped after so much enough being spent on Them, when They could have been Campleted & a book to The whole Community: The Coming Stock show & exibition would be more popular with Camp people if They Could come by motor transport instead of Suffering The discomfort of a Sea voyage added to the freeter cost of steamship rates.

The value of opening up the country by roads used no stressing or how the work would affect The unemployed

that The members of The League ask

His Excallency to Counter Their wisher in

This water of Commence The Campo reach

in The new fature to That when The men

return from wheling work they need have

no fears of being unemployed.

As agricultural improvements of roads

want to hand in hand it is Suggested

That Some of The surray alloted to The

again. Department could be applied to new

Campo roats of peet roads as well.

The Hor Colonial Senetary Stanley I have The hours to be Sin Your obedient Sewant w. T. In? alaney Secretary Sir,

Bed It.

I am directed to inform you with reference to your letter of the 14th instant on the subject of camp roads that His Excellency is glad to have the opportunity of removing certain misapprehensions which as shewn in your letter, exist concerning the reasons for stopping the work and precluding continuance for the present.

2. The cost of the roads which have been made has been as follows:-

South Track, Common Gate to Pony's £1672 per mile Pass,

Morth Track, Wireless Station to \$1584 " "
Two Sister's Gate

- 3. The late Director of Public Works, whose experience of road making here forms the only reliable basis for estimates, supplied the figures shown below for costs of construction through each type of camp. There may be said to be three types through which road making has to be carried out:-
 - (a) Soft Camp
 - (b) Where clay is found within six inches of the surface
 - (c) Stone runs.

Exclusive of the expenditure on bridges, on machinery and on portable quarters for the ganger and labour, the expenditure on (a) would be £1584 a mile (b) £1522 and

(c)/

(c) £1200. Mr. Roberts considered that a fair estimate for the usual camp tracks in the East Falkland would be 50% of Soft Camp 40% of hard Camp and 10% of stone runs.

4. The Director of Public Works estimated that to complete the roads to Fitzroy (16 miles) and the Estancia (11½ miles) the cost would be \$\mathrm{C}42,599\$ made up as follows:-

50% of 27½ miles = 13½ © 21640 per mile = 222,550
40% " " = 11 © 21522.13. " = 216,749

10% " " = 2½ © 21200 " " = 2 3,300

Total 242,599

The first figure includes the cost of small bridges, machinery and portable quarters. The latter would be available for all the work. The average cost for the roads would be £1584 a mile.

- 5. The Government has not had anything like such a sum as that named for completion of the roads, at disposal. There would be no economic return whatever for the great expenditure involved. To utilize as suggested by the Reform League part of the money now spent on Agriculture for road making would scarcely help. The whole of the vote for labour for the Agricultural Department for the year would suffice or the addition of little more than a mile to each road.
- Falklanders have complained and not without justification that Government spare funds have never been expended for works of use to them. Any road built should have as its terminus a port which could be reached in the Sound to bring West and East closer together. I road to Brenton Loch the nearest point would cost more the \$100,000.
- 7. There are people who decline to accept fin

because a single car can move over hard camp or a scraped surface at a suitable time of the year the expenditure on a public road would be far less than No one with any experience of 21500 to 21600 a mile. the wear and tear and the effect of rains on a road sufficient even for light lorries and cars would support such an idea. It may be mentioned that a strong advotate of roads in the Falklands recently made an exhaustive examination into the costs of road making elsewhere. He formed the conclusion that it should be possible to construct a satisfactory type of read for 22000 a mile here though a service road for contractors over rocky and pesty ground in Perthshire cost \$2500 a He had no knowledge of the expenditure incurred It would cost much more than £1584 to on our roads. make a surfaced road like the Surf Bay road. Few cars would last long with regular running on the present camp roads.

- 8. It is not only the capital cost of construction that has to be considered but the maintenance charges. The cost of road making could only be met by expenditure from reserves. In addition to the capital outlay the loss of interest and the expenditure on maintenance, that is to say up to 10% in all of the original cost, would have to be made good annually. It is not suggest ed that there would be any economic return to the public from the construction of motor roads through the camp.
- 9. I am to state that His Excellency's view of the position is that it would be a great deal less expensive primarily and annually to maintain a passenger carrying scaplane service than to construct roads. The whole Colony would benefit from such a service and there is probably more prospect at present of such a service being established than of road development. No such enterprise could of course be contemplated while there



are any labourers for whom part time employment only is available.

would like the Reform League to realize that the whole policy of the Government for the past four years has been concentrated on finding how to increase the carrying capacity and productivity of the land, the sole source of wealth that exists in the country. It is an essential part of this policy that the workers should by increased employment and otherwise have a full share with other sections of the community in any benefits, if success results. The policy, right or wrong, does not as the League will agree, pormit of large sums being diverted to other purposes such as road construction.

I am,

Sir,

Your obedient servant,

men

Colonial Secretary.

(20)



Stanley 18 th april 79

Li

I am instructed to reply to your tollor No. 76/38 of 27 the Tanay 39 Consuming The question of Comp roads.
The manufact of The Reform League do not feel inclined to accept the figures of cost as fiven as many of them have been engaged or this work of believe roads could be made cheaper.

They respect fully Suggest That a certain amount, Say a will or two of road Should be soon on Contract as a practical proof of The Coet.

The Hong Coloniel Searchary Stanly The Si the Si Your obedient Sewant w. J. M. s. along Secretary 76/38.

22nd May, 39.

Sir

In continuation of my letter No. 76/38 of the 28th of April, 1939, I am directed to inform you that a sum will be set down provisionally in the 1940 Estimates for the construction of one mile of metalled road by contract.

I am,

Sir,

Your obedient servant,

men

Colonial Secretary.

Red (21)

THE STANLEY MOTOR CLUB.

Christ Church Cathedral

Port Stanley Falkland Islands

REV GERALD K. LOWE

Secretary

July 12th, 1939

Honourable Sir:

The Exectutuve Committee of the Stanley Motor Club have instructed me to write to you asking for an interview with His Excellency the Governor. The object of the interview is to discuss with His Excellency the possibilities of Extending the Camp roads.

Would you kindly let me know at your convenience if such an interview is possibile,

Yours Faithfully,

Secretary S.M.C.

Amarch K. house.

The Honourable,
The Colonial Secretary.

Stanley.

76/38.

13th July,

39.

Reverend Sir,

Zed23:

With reference to your letter of the 12th of July, 1939, I am directed by the Governor to inform you that His Excellency will be glad to meet the deputation from the Stanley Motor Club at Government House on Tuesday 18th July at 11 a.m.

I am,

Reverend Sir,

Your obedient servant,

Colonial Secretary.

The Reverend
G. K. Lowe,
Secretary,
Stanley Motor Club,
STANLEY.

76/38.

25th July, 39.

Reverend Sir,

I am directed by the Governor to transmit the accompanying copy of a note of the interview a deputation from your Club had with His Excellency on the 18th July, 1939.

- 2. I am to say that since meeting the deputation His Excellency's attention has been called to the cost of road making in England. The Civil Engineers Cost Book (1931 Edition) lays down that the cost of making light roads on private estates is 6s/- to 8s/- per yards super. For a 12 foot road the cost is therefore approximately £2,000 a mile. The cost of maintenance of roads in rural districts in the United Kingdom is £150 to £300 a mile per annum.
- 3. To complete the road to the Estancia at a cost of £1,500 a mile (or £140 a mile below the estimate of Mr. Roberts) would cost £18,000.

I am,

Reverend Sir,

Your obedient servant,

Colonial Secretary.

ev. G. K. Love, lecretary, Stanley Motor Club, STANLEY.

26

Note of interview by His Excellency the Governor to deputation of Stanley Motor Club at 11.0 a.m. on Tuesday the 18th July, 1939.

The Revd. G. K. Lowe, Messrs: L. Sedgwick, Deputation.

J. McGill and E. Crawford.

Mr. McGill, the Vice-Chairman of the Motor Club, enquired whether the Government was considering the extension of roads to the camps, and stated that it was the opinion of the Motor Club that work should be resumed on extending the North Camp Road in preference to the Pony's Pass Road, which is considered of no importance regarding the opening up of traffic and communication with the majority of the farms.

His Excellency pointed out the impossibility of carrying roads further through the camps until such time as any benefit would accrue therefrom, either on the East or West Falklands, and acquainted the deputation with the capital costs of the roads already built here, also in other parts of the world with which he was familiar, and the amount required to maintain them. Details were given in extracts of a letter to the Reform League, a copy of which was handed to Mr. McGill.

Mr. Crawford was of the opinion that the costs of each of the camp roads was exceedingly high and felt confident that similar work could be turned out at a much lower figure, in which he was supported by the Revd. Lowe, who compared the cost of making up roads, equivalent to about £700 per mile, over virgin ground in Canada with that of the Falklands. He was informed by the Governor that similar work here, with surfacing cost about £630 a mile but that this was very different from road construction.

His Excellency furnished the deputation with a copy of a letter to G. Bonner, Esq., in 1938, replying to the suggestion of several farmers that the construction of roads to the camp should continue for the benefit of the camp population. The apparently high cost of road making was it was explained owing to the following work necessary. The road should be sited where there is not more than one foot to eighteen inches of peat wherever possible. The top sod has to be removed, the subsoil well drained and drainage trenches cut on the high side of the road. A mattress of rock from eight to nine inches in thickness must be put on the clay: this should receive from three to four inches of broken stone or gravel: finally it should have a dressing of binding material and be consolidated with a ton roller.

The deputation was further informed that it was His Excellency's intention to make provision in 1940 as an experiment for one mile of road to be put out to contract, either as one or two separate works, which they felt certain would be readily accepted by local workers.

It was clearly understood that apart from the amount required for the maintenance of existing roads, no funds for the cost of continuous construction could be found without additional taxation.

The deputation thanked His Excellency and withdrew.