

C.S.

MAJOR WORKS.

Sanitation.

1923.

No. 257/1923.

SUBJECT.

1923.

29th March.

Preliminary Report by A.A.P. Neave, Esquire,
Assoc. M. Inst. C. E.

Previous Paper.

Schemes proposed for the improvement of Stanley

MINUTES.

Extract from minutes of meeting of Executive Council
held on the 29th of March, 1923.

The Council agreed that the works dealt with in the report were necessary in the light of providing Stanley with modern sanitation but considered that, for financial reasons, they were impracticable as contemplated. It was decided that Mr. Neave should be asked to furnish a further report on the extent of the improvements which could be effected for a total sum ^{not exceeding} of £30,000 on the lines of the following modified scheme:

- (1) The provision of a water supply for flushing purposes only by means of a concrete tank constructed on the top of the hill overlooking the Magazine Valley: the damming of the valley and the erection of two windmill pumps and an oil engine for use in the case of a shortage of wind power.
- (2) The construction of an adequate draining system and the improvement of roads necessary in this connection.

Subsequent Paper.

(3)./

- (3) The improvement of the present earth closet system by removing the night soil in carts of a larger and more suitable type and the disposal refuse by means of a destructor.

G.R. Brown.

Clerk of the Executive Council.
29th March, 1923.

O.S.C./C.S.O.

Staff despatch attached by

14 April 1923

Despatch to S. of S. no. 51 of 18/4/23. Encl. (1)

J.G. Submitted

G.R.B.

O.S.C./C.S.O.

18 April 1923

18 April 1923

Minute from ag. Governor, 3/7/23. Encl. (2)

Despatch to S. of S. no. 87 of 5/7/23. Encl. (3)

Letter to Crown Agents, 5/7/23. Encl. (4)

Reply to Encl 4. filed and dealt with in M. P. 23/24 G.R.B.

O.S.C./C.S.O.

14 July 1924

Despatch to S. of S. no. 30 of 17/3/24. Encl. (5)

H.C.S.

- All separate reports on proposals for improvement of sanitary are being sent down for information of Members of Executive Council.

2. Mr Craig Halkett has sent Mr. Neave's preliminary report of February 1923 + my copy is attached to this.
3. I am anxious that the whole matter should be considered by the Executive Council at as early a date as possible.

M.

12 July 1924

Hon. Ag. Treasurer.

Copy of preliminary report
herewith.

M. H. Brown

Col. Colonial Secretary
14 July 1924

Hon. Col. Surgeon.

Papers and 1 roll containing
plan. passed to you by
direction of the Col. Secretary.

M. Craig Halkett

Ag. Treas.

22.7.24

Hon. Col. Secretary

Notes file.

H. W. Deane

23/7/24. Colonial Surgeon

see M.P. 465/24

M.
25 July 1924

Despatch to Secy. No 75 of 14 Aug 1924

Y.S.

Submitted

~~ttttt~~ 16 Aug 24

By

16 Aug 1924

Y.S.

Submitted with draft

Letter to Mr. Basch

~~ttttt~~

12 September 24

Thank you. By

12 Sept 1924

Letter to Mr. Basch 12th September

(7)

H.P.S.

Draft despatch attached in continuation

76.

By

20 Oct 1924

Despatch to Secy No 91 of 2nd October (8)

Y.S. Copy of draft attached submitted

~~ttttt~~

3 Oct. 24

By

30 Oct 1924

H.C.S.

SqS has informed me by telegram in reply to ⑥ that he agrees in principle & approves of suggestion to place matter before Legislative Council (para 5 of ⑥)
 2. Provision can be made in estimates 1925.
 An explanatory minute may be necessary.

for
 15 Oct 1924

8 of 8 despatch No 101 of

28th October 1924 — Encl ⑨

Letter to Crown Agents of 27th October 1924 — " ⑨ A

Letter from Crown Agents of 15th October 1924 — " ⑨ B

Y.E. Draft minute submitted for Y.E. consideration. I regret that there has not been time to type it yet.

10 Dec. 24

H.C.S.

I thank you. minute will be prepared accordingly for next meeting of Leg. Council

for
 18 Dec 1924

Extract from minutes of meeting of
Legislative Council held on the 22nd of
December 1924.

The minute was adopted.

C. R. Rogers
Clerk of the Legislative Council.

Telegram from S. of S. 7th Jan'y, 1925. (11.)

W. L. 12
Submission

13 Feb. 25

H. P. S. 13.

Mr. Challen should be informed that
Mr. Roberts is expected early in March
& should have cable station taken in
good view for occupation well in
advance of arrival of Mr. Roberts.

2. There is no matter, I think, upon
which it is necessary to communicate
with Mr. Roberts by telegram, while he is
in England?

R. N.

14 Jan'y 1925.

14

Mr. Challen informed verbally

There is nothing to telegraph to

Mr. Roberts as far as I know.

B. L. 20: Feb.

14 Feb. 25

(1.)

LAND ISLANDS.

51.

GOVERNMENT HOUSE,

STANLEY,

18th April, 1923.

My Lord Duke,

Secretary of State
No. 112 of the 29th
November, 1921.

Secretary of
State No. 72 of the
31 July, 1922.

With reference to the correspondence noted in the margin, I have the honour to transmit, herewith, a preliminary report by Mr. A. A. P. Heave, A.M.I.C.E., on schemes for a Water Supply, and Drainage and other measures for the improvement of the town of Stanley. An additional copy of the report will be forwarded when copies of the plans annexed to it are available.

2. It is much to be regretted that the preliminary estimates of the cost of a water supply show that the project is beyond the resources of the Colony and that the complementary scheme of drainage must in consequence be abandoned.

3. Mr. Heave has accordingly been requested to prepare a modified scheme for the improvement of the sanitary conditions of Stanley on the understanding that, for financial reasons, the town must remain dependent on water collected from the roofs of buildings and that the earth closet system must be retained.

4./

HIS GRACE THE DUKE OF DEVONSHIRE,

P.C., K.G., G.C.M.G., G.C.V.O.,

SECRETARY OF STATE FOR THE COLONIES.

4. I desire to record my appreciation of the valuable assistance which Mr. Neave has rendered to this Government in investigating the possibilities of improving the sanitary conditions of Stanley.

I have the honour to be,

My Lord Duke,

Your Grace's most obedient,

humble servant,

 J. Middleton.

from His Excellency the Acting Governor

to The Officer-in-Charge of the Secretariat.

Mr. Leave left the attached further reports with me today.

I send herewith a despatch to be fared. Will you please have copies made of Dr. Deane's letter.

The Commission Agents should also be asked, & with reference to the letter on the Plant, to enquire whether a ^{new hand} steam roller can be obtained 6-7 hrs, and the cost, and also to obtain the information required in para. 5 of the letter.

ttttt 3 July 1923

Fort Stanley,

FALKLAND ISLANDS.

30th June, 1923.

The Honourable

The Colonial Secretary,

FALKLAND ISLANDS.

STANLEY - Improvement Scheme.
Plant.

Sir,

With reference to my Preliminary Report dated February, 1923., the question of the provision of suitable plant before any improvement works can be satisfactorily carried out is important.

2. As regards provision of a steam roller for roads, in view of the fact that the total mileage of roads is very small the question of the purchase of a satisfactory second hand roller is worth consideration. On my departure from England in the Autumn of 1921 there were a very large number of steam rollers surplus from the Army requirements, many of them in very good condition. If such a roller with a dead weight of say 6 to 7 tons is available a considerable saving in cost over that of a new roller might be effected. At the same time care should be exercised and the purchase of such a machine should only be made on the certificate of a firm of high standing, such as Messrs Aveling & Porter Ltd., who specialise in steam road roller manufacture, that the condition of the roller - and particularly as regards the boiler - was, after thorough examination, overhaul and test, found to be quite satisfactory in all respects. The fitting of a scarifier to the roller was mentioned as desirable in my preliminary report, but as this is not really essential in view of the limited funds available for public works I do not now consider the additional cost of a scarifier fitting justified and suggest it be omitted. It will be desirable, however, to obtain a certain number of the most often required spare parts of the road roller.

Richborough

3. With regard

3. With regard to stone crushing plant there are suitable stone crushers (not all in use) at the Naval Camber also a steam engine for driving crushers and concrete mixer, which I understand the Admiralty offered to the Colonial Government some two or three years ago. The whole of this plant is not at present available being in use, but will probably be available by the time the Colonial Government is in a position to undertake the improvement works. I recommend that negotiations for purchase of this plant be re-opened.

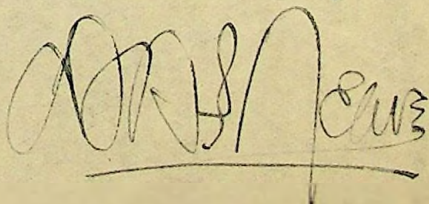
4. There is also a 'Winget' machine suitable for large size (27" x 9" x 9") concrete blocks at the Camber. This machine is however not of recent date and enquiries as to more modern machines have been made through the Crown Agents and details are expected next mail. It will probably be advisable however to negotiate for purchase of the above Winget machine as it would be very suitable for certain classes of work even although a small and more up to date machine be also obtained primarily for cottage construction.

5. I also recommended in my preliminary report that a No. Ford (1 ton) lorries and spares be obtained; and a small portable rock drilling plant for removal of boulders and outcropping rock on sewer and water main trench lines prior to laying pipes. This latter should be light and compact on small carriage with broad flange wheels for easy transport along pipe line routes and may be either (a) compressed air driven off paraffin engine, or (b) steam driven. Messrs Merryweather, the well known fire engine builders, manufacture a machine of this type I believe. I suggest enquiries be made for these items from several manufacturers through the Crown Agents and particulars and quotations be obtained from makers for consideration. The drilling plant must be capable of drilling shot holes for insertion of blasting charges in the local metamorphic sandstone rock which is of an extremely tough character.

I am,

Sir,

Your obedient Servant,



Colonial Surgeon's Quarters,
Port Stanley,
Falkland Islands,
4th July, 1923.

Sir,

Your letter on an alternative water scheme under the Stanley-Improvement Scheme dated 27/6/23 and covering note dated 3/7/23 to hand.

I quite agree with you that a water supply should be the first on the list of the improvement scheme; as water is a prime necessity of life; and I can see no objection to the water in the mile pond being used if the pond is properly fenced and the depth of water increased by damming the west end of the pond, and the water filtered either through sharp sand filters or the high pressure filter you suggest.

The water would be far more healthy and palatable than the water at present caught off the painted roofs in a most primitive fashion, and polluted by sea birds, &c., &c., &c.

Yours faithfully,

(Sgd.) F.G.W.Deane, F.R.C.S., Ed.

Colonial Surgeon.

A.A.P.Neave, Esq.,

Consulting Engineer O i/c Naval Works.

Port Stanley,

FALKLAND ISLANDS.

27th June, 1923.

STANLEY - Improvement Scheme.

Sir,

With reference to my preliminary report on the above subject dated February, 1923 and the decision of the Executive Council that the cost of the scheme put forward for a water supply from Sapper Hill (estimate £24,000) cannot be met, I enclose copy of a report dated 27th June 1923 containing a proposal for a cheaper and less comprehensive water supply scheme for the favour of your remarks before I forward it to the Colonial Secretary.

It is disappointing that financial grounds do not permit of the adoption of the Sapper Hill scheme as I think you will agree that apart from several other considerations the quality of the water from this source is better than the alternative supply from the Mole Pond now contemplated. However, as the former scheme cannot be carried out I suggest that the alternative scheme now proposed will effect a very decided improvement in the sanitation of the town even although it will be much less complete than the original scheme, and the question of general house to house water supply and water borne sewage will apparently have to be left to the very remote future.

A copy of the analysis of the Mole Pond water is contained in Appendix I of my preliminary report of February last from which it appears that the Mole Pond water contains a much higher percentage of dissolved solids (of which a considerable portion is organic matter), a much higher percentage of sodium chloride (probably wind borne from the adjacent sea) and is considerably harder than the Sapper Hill sample, besides which the low level of the pond renders the possibility of animal contamination greater than would be involved in collecting water from the entirely enclosed apex of Sapper Hill.

I am,

Sir,

Your obedient servant,

F. A. G. Deane Esq., F.R.C.S.E.
The Honourable
The Colonial Surgeon,
STANLEY.

F. A. G. Deane

Enclosure.
Copy of report.

Port Stanley,

FALKLAND ISLANDS.

27th June, 1923.

The Honourable

The Colonial Secretary,

FALKLAND ISLANDS.

STANLEY - Improvement Scheme.

Sir,

With reference to my preliminary report on the water supply, drainage, roads, landing and lighting of Port Stanley dated February, 1923., and the meeting of the Executive Council held at Government House on the 29th March, 1923 when at His Excellency the Governor's request I was present during the discussion of the report, and the decision that as the Council are of opinion that the finances of the Colony render it impracticable to proceed with the entire scheme I should advise as to how a sum of say £20,000 in public works (not exclusive of housing) could most advantageously be spent in the immediate improvement of the town whilst allowing a certain amount of scope for possible extension at some future date should altered conditions ever render this possible, I beg to state as follows :-

2. Following on the discussion of the report during which I explained certain details of the proposed works it was decided that the most costly item (i.e. the Sapper Hill water supply estimated to cost £34,000) must be omitted, and it was suggested that the modified scheme to the extent of £20,000 should be based on the following general lines:-

- (a). Drainage works to be carried out as a more or less complete scheme but to be modified where it is possible to effect savings, and the lesser important portions of the scheme which is to be designed as a whole to be retained.
- (b). The question of bye-laws regarding adequate drinking water tanks for each house to collect roof rainwater and the cost of concrete tanks to be considered and a scheme for non-potable water supply from Magazine Valley for fire hydrants, fire-fighting sewers, etc., to be prepared, unless I could suggest any better alternative for supplying water at a moderate outlay.

(c). The

(c). The installation of S.O.'s to be indefinitely postponed and the S.O. system improved by under introduction of "the tail system", bacteriometer, and other parts to be provided for S.O.'s and house refuse.

(d). Excavated roads to be made up and road making plant provided.

(e). The housing scheme to be treated as not included in the figure of 750,000 in question.

3. Since the date of the above Council meeting circumstances have not yet permitted by preparing the modified scheme which involved a considerable amount of investigation and time, but as the data already collected I have given the matter such further consideration particularly as regards the question of water supply.

4. As mentioned in my preliminary report I feel most strongly that a proper water supply is the most urgently required of all the improvements proposed, and I cannot recommend any extension of rainwater tanks, and consider that if at all practicable this system should be finally abandoned. I have therefore reviewed the whole question of water supply with the object of evolving if possible some scheme, which, whilst falling short of the Sapper Hill scheme, will effect a very marked advance on the present unsatisfactory system of tanks and at a considerably lower cost than that scheme.

5. Whilst still of the opinion that the Sapper Hill scheme is undoubtedly the grandest scheme I have not come to the conclusion that as this scheme is ruled out on the score of expense the best alternative will be to use water from the larger of the two low level ponds (in an area its length as "The Hill Pond") situated near the South shore as referred to in paragraph 13 of my preliminary report and to install a modified system of mains in the town with street fountains or stand pipes, and to postpone the house to house installation to the future.

6. I consider that a scheme on these lines can be evolved for roughly half the cost of the Sapper Hill supply and propose to prepare such a scheme, which I will submit in due course.

7. His Excellency and the Acting Governor were kind enough to give up an afternoon recently to the discussion of this question and approved of the scheme I now put forward.

G. Briefly

8. Briefly the scheme will involve the following works :-

The construction of a new house and installation of oil engine (say about 10 H.P.) and pump and approximately 1 1/2 miles of 3 1/2" diameter coated and wrapped lap welded steel piping leading across the ridge to the upper part of Fort Stanley, the maximum height of the ridge being estimated (in the absence of actual levels) at say about 250 feet above pump house. Coupled to the pump will be a high pressure mechanical filter with small lining and alumining plant. A small service reservoir will be necessary on the ridge, and it is also proposed to utilise the high level Spring Paddock Reservoir - if practicable enlarging it - to supply Government House and the lower portions of the town. From these reservoirs a modified system of street mains in selected streets will be required to feed a series of street fountains from which the inhabitants will carry the water in buckets or barrels. Fire hydrants should also be included. These mains will be designed to admit of extension and house supply pipes can be arranged for those willing to bear the additional cost where houses are situated within reasonable distance of the street main. The pumping and mechanical filtering plant should be in duplicate, but this would not be absolutely essential in the first instance a third highly desirable. The capacity of the service reservoirs will be largely dependent on the adoption of such duplicate plant and a few days storage will suffice if the stand by set of plant (to be worked alternately with the other set) is installed. A cottage for the resident engineer close to the pumping station will be required and also a certain amount of fencing to keep animals away from the vicinity of the pond.

9. This scheme will of course be less complete than the original scheme but will certainly overcome the pressing need for water and although the water may be less free from the possibility of contamination than the Sapper Hill source of supply I consider that compared with the present unsatisfactory system of collecting roof water it will effect a very distinct advance on existing conditions.

10. The system of inhabitants drawing supplies from public street fountains is of course a common one in many parts of the world. As regards the criticism which may be raised that the people may ordinarily continue to use roof water tanks and only resort to the fountains in time of drought I think it will be found that the improved flavour of the water, compared with the present roof water which always possesses an objectionable flavour even after filtering, will lead to its use at any rate for

notable for uses & growing in use if not universal. Moreover the life of the steel tanks in general use is limited and as they wear out it is doubtful if the inhabitants will go to the expense of new tanks with a public supply available especially as in many cases pipe house connections can be arranged at moderate cost. At any rate an ample supply for the not infrequent periods of water shortage will be provided at the small trouble of fetching the water from the street fountains and it will also be possible to connect service lines to most of the larger buildings as soon as the installation has been completed.

11. I have only outlined the alternative water scheme in this report but am proceeding with my investigations for the preparation of drawings and estimates.

12. I am also proceeding with the questions of drainage and sanitation also housing, and will submit my reports later.

13. I attach copy of correspondence with the Honourable the Colonial Secretary on the subject of this alternative water supply.

and have the honour to be,

Sir,

Your obedient servant,

W. B. Mearns

Enclosures.

Copy letter dated 17th June, 1923
to Colonial Secretary.

Reply. dated 4th July 1923

FALKLAND ISLANDS.

No. 37.

GOVERNMENT HOUSE,

STANLEY,

5th July, 1925.

My Lord Duke,

With reference to the Governor's despatch No. 51 of the 18th of April, dealing with the subject of improvements to the town of Stanley, I have the honour to transmit a further interim report from Mr. Heave relative to the provision of a water supply.

In duplicate.

2. I do not think that a proposal in any form that the supply should come from the surface drainage of the common is acceptable, except as a last resort, for obvious reasons.

3. In despatch No. 15 of the 25th of February, 1946, Governor Moody reported that he had caused two wells to be dug to replace a costly scheme for piping water from springs. In the first, after digging down 16 feet through clay of various consistencies a volume of water was found; a second well was dug with success through stony clay, clay slate and quartz rock to a depth of 20 feet. These wells have since been filled up, as have wells in other countries and for the same reasons. If however any considerable supply can be obtained by boring, the water being pumped up by windmill, such as are used/

HIS GRACE THE DUKE OF DEVONSHIRE,

P.C., K.C., G.C.M.G., G.C.V.O.,

SECRETARY OF STATE FOR THE COLONIES.

used with success in the Colony and elsewhere, great economy will result.

4. I have drawn Mr. Heave's attention to the proposition. He has been handicapped by the absence of records of any borings and by not having any boring plant. He wishes to investigate the possibilities, for the water should be pure. A further report will be made in due course.

5. It is proper to state that the absence of any proper index to early despatches from the Colony has precluded any earlier reference to Governor Moody's despatch, to which I have referred.

I have the honour to be,

My Lord Duke,

Your Grace's most obedient,

humble servant,

H. Henniker-Heaton.

Extract from letter from Mr. A. A. P. Neave, Officer-in-Charge
of Naval Works locally, dated 30th June, 1923.

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2. As regards provision of a steam roller for roads, in view of the fact that the total mileage of roads is very small the question of the purchase of a satisfactory second hand roller is worth consideration. On my departure from England in the Autumn of 1921 there were a very large number of steam rollers surplus from the Army requirements, many of them in very good condition. If such a roller with a dead weight of say 6 to 7 tons is available a considerable saving in cost over that of a new roller might be effected. At the same time care should be exercised and the purchase of such a machine should only be made on the certificate of a firm of high standing, such as Messrs Aveling & Porter Ltd., who specialise in steam road roller manufacture, that the condition of the roller - and particularly as regards the boiler - was, after thorough examination, overhaul and test, found to be quite satisfactory in all respects. The fitting of a scarifier to the roller was mentioned as desirable in my preliminary report, but as this is not really essential in view of the limited funds available ~~money~~ for public works I do not now consider the additional cost of a scarifier fitment justified and suggest it be omitted. It will be desirable, however, to obtain a certain number of the most often required spare parts of the road roller.

5. I also recommend in my preliminary report that 2 No: Ford (1 ton) lorries and spares be obtained; and small portable rock drilling plant for removal of boulders and outcropping rock on sewer and water main trench lines prior to laying pipes. This latter should be light and compact on small carriage with broad flange wheels for easy transport along pipe line routes and may be either (a) compressed air driven off paraffin engine, or (b) steam driven. Messrs Merryweather, the well known fire engine builders, manufacture a machine of this type I believe. I suggest enquiries be made for these items from several manufacturers through the Crown Agents and particulars and quotations be obtained from makers for consideration. The drilling plant must be capable of drilling shot holes for insertion of blasting charges in the local metamorphic sandstone rock which is of an extremely tough character.

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257/23.

5th July,

23.

Gentlemen,

I am directed by the Acting Governor to transmit herewith an extract from a letter from Mr. A. A. P. Meave, Officer-in-Charge of the Naval Works Locally, who is at present investigating on behalf of the Colonial Government the practicability of certain works proposed for the improvement of the roads and drainage of Stanley.

2. The letter deals with the question of the provision of suitable plant and I am to request that you will be so good as to obtain the information required as indicated in the extract, together with particulars of cost.

I am,

Gentlemen,

Your obedient servant,

G. R. L. Brown,
for Colonial Secretary.

The Crown Agents for the Colonies,
4, Millbank, Westminster,
London, S.W.1.

(5.)
FALKLAND ISLANDS.

No. 30.

GOVERNMENT HOUSE,

STANLEY,

17th March, 1924.

Sir,

With reference to Mr. Middleton's
despatch No. 51 of the 18th of April, 1923,
I have the honour to transmit an additional
copy of Mr. A. A. P. Heave's preliminary report
on the schemes for a water supply and drainage
and other measures for the improvement of Stanley.

I have the honour to be,

Sir,

Your most obedient,

humble servant,

H. Henniker-Heaton.

THE RIGHT HONOURABLE

J. H. THOMAS, P.C., M.P.,

SECRETARY OF STATE FOR THE COLONIES.

(6)

FALKLAND ISLANDS.

No. 75.

GOVERNMENT HOUSE

STANLEY,

14th August, 1924.

Sir,

With reference to my despatch, No. 51 of the 18th of April, 1923, relative to improvement works for the Town of Stanley, I have the honour to transmit to you the following further reports from Mr. A. A. P. Neave, B.Sc., A.M.I.C.E.

(1) Report, dated 3th July, 1924, on works recommended at a cost not exceeding £20,000, if the Town is to remain dependent on water collected from the roofs of houses.

Enclosure 1

Encls 946/24

(2) Report, dated 21st July, 1924, on his investigations as to the possibility of obtaining water from Artesian Wells.

Enclosure 2

Encl 35-9 707/23

(3) Report, dated 24th June, 1924, on a water supply from the Stone Run at Saddle Hill, distant 6 miles from the Town.

Enclosure 3

Encl 5: 927/24

(4) Report, dated 4th August, 1924, on a water supply from the Stone Run at Mount William, distant 3 miles from the Town.

Enclosure 4

Encl 1a 952/24

(5) Report, dated 31st May, 1924, on a drainage scheme for collection and discharge of foul water.

Enclosure 5

Encl 1 of 412/24

2. In paragraph 99 of his preliminary report Mr. Neave suggested that "in the interests of public health the provision of the water supply connected to a series of public fountains and the provision of the outfalls and main arteries of the drainage system so that foul water can be properly collected and discharged, should take precedence over all other work." After giving most careful consideration to

THE RIGHT HONOURABLE J. H. THOMAS, P.C., M.P.,

SECRETARY OF STATE FOR THE COLONIES.

the/

the difficult problem of a supply of potable water, Mr. Neave has advised me that, although it is necessary that the total expenditure on improvements should not exceed £30,000, - a sum which he regards as hardly adequate for all desirable works, - one half of this amount should be expended on a water supply, and urges very strongly that this work should be carried out without delay.

Enclosure 6

3. Mr. Neave's reports have been considered by the members of the Executive Council, who at a meeting held on the 8th of August, recommended the adoption of the scheme for a supply of water from the Mount William Stone Run.

Enclosure 7

4. I considered it desirable to obtain an expression of the views of the unofficial residents in Stanley on the works which they regarded as being most urgently required for the improvement of the sanitary condition of the Town, and a note is annexed of the proceedings of a meeting, which was held on the 12th of August, of past and present members of the Board of Health. I endeavoured to put the whole position before the meeting as clearly as possible, and those who were present were strongly in favour of the adoption of the scheme for a supply of water from the Mount William Stone Run. They further concurred in the allocation of the funds, if the expenditure is approved, in the following manner:

(1) Water Supply	£15,000
(2) Plant	2,500
(3) Provision of Incinerator	1,000
(4) Drains and Roads	11,500
	<hr/>
	£30,000

I took occasion to warn those present at the meeting that, although the residents of Stanley, who would chiefly benefit by the improvements, could not bear directly any very large proportion of the cost, it would be necessary if the proposed works were carried out, to increase the existing rates on house property in the town.

5. I have the honour to recommend that works for the improvement of the town should be proceeded with on the lines proposed, and to seek your approval to the Legislative Council being invited to sanction the expenditure of the sum of £30,000 from the surplus cash balances of the Colony.

6. Owing to the irregularity and infrequency of mails from England at the present time, I shall be grateful if you will be so good as to inform me of your decision by telegram.

I have the honour to be,

Sir,

Your most obedient,

humble servant,

J. Middleton.

JM
16 August 1924

Extract from the minutes of the meeting of the
Executive Council held on the 8th of August, 1924.

The Council, in consultation with Mr.
A. A. P. Neave, Assoc. M. Inst., C. E., resumed
consideration of the schemes proposed for the
improvement of Stanley.

The following reports by the Colonial
Surgeon, dated the 29th of July, 1924, were read:

- (1) The question of increasing the tank
supply of rain water.
- (2) Objections to a surface water supply
which required treatment with lime and
alumina.
- (3) The suggested water supply from Moody
Brook, to be fed from the spring at
Saddle Hill and the surface water
collected in Moody Valley.

The reports were considered.

A later report by Mr. Neave, dated the 4th
August, 1924, on the feasibility of a gravitational
water supply from the Mount William Stone Run, at a
cost of £15,000, was read.

The Council considered that present require-
ments in the matters of utility and economy would be
best combined in the scheme proposed, and recommended
its adoption.

.....
It was decided in order that the views of the unofficial
residents in Stanley might be obtained, regarding the
improvement of the town on the lines on which it was
proposed to proceed, prior to the submission of concrete
proposals to the Secretary of State and to the Legislat-
ive Council.

They were indebted to Mr. Neave for the care
with

NOTE OF THE PROCEEDINGS OF THE MEETING OF THE SPECIAL
COMMITTEE APPOINTED TO CONSIDER MEASURES FOR THE IMPROVE-
MENT OF THE TOWN OF STANLEY, HELD ON THE 12th of AUGUST,
1924.

The following past and present members of the Board of Health, invited by His Excellency the Governor to meet as a Special Committee to consider measures for the Improvement of the Town of Stanley, met in the Court and Council Chamber at the Town Hall on Tuesday, the 12th of August, 1924, at 6.30 p.m.

The Hon. G. I. Turner,

Mr. Thos. Binnie,

Mr. V. A. H. Biggs,

Mr. H. H. R. Gresham,

Mr. J. W. Grierson,

Mr. J. McNicoll,

Mr. J. F. Summers,

Mrs. G. I. Turner,

Mr. D. R. Watson,

Mrs. D. R. Watson.

There were also present - The Honourable H. Henniker-Heaton, The Honourable M. C. Craigie-Halkett, The Honourable Dr. F. G. W. Deane, The Very Reverend Dean Stanley Smith and Mr. A. A. P. Neave, Assoc. M. Inst. C. E., Consulting Engineer to the Government.

Plans of the works under consideration were displayed for inspection by the Committee.

His Excellency presided.

His Excellency explained that the meeting had been called in order that the views of the unofficial residents in Stanley might be obtained, regarding the improvement of the town on the lines on which it was proposed to proceed, prior to the submission of concrete proposals to the Secretary of State and to the Legislative Council.

They were indebted to Mr. Neave for the care
with/

with which he had considered the question of the improvement of Stanley. The results of Mr. Neave's preliminary investigations had been embodied in a report which he had submitted early in 1923. The works proposed were estimated to cost an aggregate sum of £75,000. The expenditure of such a sum was economically unsound on a town in which the capital value of the private property was estimated at £60,000. This estimate was based on approximately ten times the sum of £5,800 assessed by the Justices as the ratable value of Stanley.

Mr. Neave was then requested to prepare a modified scheme to cost a sum not exceeding £30,000, on the understanding that the town must remain dependent on water from the roofs of houses and that the earth closet system must be retained.

The method by which it was considered that the supply of rain water might be improved was by subsidizing the tank storage capacity and by Board of Health bye-laws compelling householders to maintain a minimum quantity of water in storage and to clean their tanks. After careful consideration, this method was not believed to be a practical proposition, involving as it did regulations which would be difficult to enforce and which would be liable to cause unnecessary friction. It was also doubtful whether the roof space would be sufficient to ensure an adequate supply of water.

At the same time it was necessary that the roads should be reconstructed and that provision should be made for the drainage of surface water and slop water.

The question of the supply of water for flushing drains had also to be considered.

Mr. Neave continued his investigations and
submitted/

submitted the following water supply schemes for consideration:

- (1) The Mile Pond Scheme to provide 10 gallons of water per head per day at a cost of £15,000. This scheme involved pumping and annual expenses of maintenance of £500.
- (2) As an alternative to this scheme, Mr. Neave suggested the adoption of a modified supply from a catchment area on the south side of Sapper's Hill, with a large reservoir and filter beds, the total cost of which he estimated at £15,000. As a gravitational scheme, this did not require the expenses of maintenance which the Mile Pond Scheme involved.
- (3) A Scheme for a water supply from Saddle Hill, to be obtained from a point 300 feet above sea level. This had the advantage of being 'spring' water, but the cost was high owing to the distance of the catchment area from the town and the difficulty of transport. The estimate of the cost was £22,000.

Mr. Neave again took up the question of a water supply from the Mount William Stone Run, dealt with in his preliminary report. This was the scheme for which Mr. Messervy had prepared plans in 1901. At a point somewhat higher up than that suggested by Mr. Messervy, the flow measured by gauge board showed 200 gallons per minute, after snow and thaw. The works now proposed in order to provide a gravitational supply from this stone run consisted of the construction of a small masonry dam across the stone run at a point 220 feet above sea level, to be connected by 3 miles of 3" piping with a reservoir near Stanley, 130 feet above sea level. A supply of 7 gallons per head per day would be ensured, the storage capacity of the reservoir being 350,000 gallons or sufficient for 50 days and the scheme would be capable of extension hereafter. The most suitable and economical site for the reservoir would be near the Town in the Dairy Paddock where there is clay. On the way to the reservoir the water would pass through a drifting sand filter of the type provided by Messrs. Vickers, Limited. Eliminating the few houses

on the high ground at the back of the town, this supply would serve the rest of Stanley, the supply being led through two miles of 3" main along Moody Street, Fitzroy Road and down the streets running north and south. Twenty-four ^{five} hydrants and six street fountains would be provided. The supply would be sufficient to enable private individuals to connect their houses at their own cost.

The cost of this scheme was estimated at £15,000. It seemed sound to consider it as a practical proposition.

Costs.

With the adoption of a water scheme costing £15,000, the provision of an incinerator at a cost of £1000 and plant [including motor vehicles, Road Roller, Stone Crusher, Concrete Mixer, &c.] estimated to cost £2500 - or a total of £18,500 expended from the sum of £30,000 to which they were limited, there would be left £11,500 for the improvement of roads and drains.

Drainage.

The scheme proposed by Mr. Neave provided for three outfalls, one at the watering jetty, one between the West Store and the Public Jetty and one near Hebe Street, the last two to be carried on piles. This drainage was only for surface water and slop water. The storm water would be collected by two open catchment grips along the top of the hill behind the Town and diverted to the outfalls at the west and east ends of the Town. The underground drainage system would be capable eventually of being adapted with modification to a water borne sewage system.

Roads.

With regard to the roads, it was not possible to undertake a ^{comprehensive} ~~comprehensive~~ scheme of road reconstruction with the balance of funds available, but a great deal could be done with the plant at their disposal.

It was proposed to put down a concrete pavement along a portion of Ross Road.

His Excellency invited the members of the Committee to ask questions and to express their views regarding the improvements proposed and to discuss the outlay of the sum of \$30,000 to the best advantage.

Mr. V. A. H. Biggs, who in 1917 had been a member of the Board of Health which reported on the urgent need for measures for the improvement of the roads and drains, said that at that time it was certainly the idea of the Board that the Town should ultimately be provided with a water supply as well as a proper drainage system. He considered that the provision of an adequate water supply both for consumption and for the flushing of drains was absolutely necessary for the health of the people.

Mr. Grierson who had also been a member of the 1917 Board of Health, said that he was strongly in favour of a water supply and should like to see the proposed drainage scheme develop into a water borne sewage system. On the question of filtration he asked if it would not be preferable to have the water pass through the filter after leaving the reservoir. Mr. Neave replied that this would be preferable, but that he would not advise it on the ground of expense.

Mr. McNicoll questioned Mr. Neave on the construction of Fitzroy Road. Mr. Neave replied that
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the proposed drainage scheme allowed for a system of road gullies which would greatly improve the road.

The Hon. G. I. Turner expressed himself as being in favour of a water supply and the other improvements on the lines proposed.

The Very Reverend Dean Smith asked if an additional amount would be necessary for the maintenance of the schemes when completed. His Excellency replied that it would be necessary to increase the present rates on house property in Stanley. It was also anticipated that additional revenue would be derived from the sale of water.

The Very Reverend Dean Smith also asked whether local or outside labour would be employed on the works. His Excellency replied that he would put forward suggestions to the Legislative Council for the expeditious carrying out of the works.

Mr. Gresham said he was sure that the Falkland Islands Company would agree to dispose to the Government the site required for the reservoir.

Mr. Watson expressed himself as being strongly in favour of a water supply.

There was general concurrence from all members present in strong favour of the works proposed.

16 August 424

257/23

12th September,

24.

Sir,

I am directed by the Governor to confirm His Excellency's intimation to you that it is the policy of the Government, in accordance with the practice in other Colonies, to create a special branch for carrying out the new works under the Stanley Improvement Scheme. The reasons are broadly that effective supervision of the works can only be secured by the employment of an official with no other calls upon him and no routine duties to perform apart from his special work.

2. I am to inform you expressly that the arrangements made reflect in no way upon your capabilities or position. The Governor is fully sensible of the very loyal and devoted manner in which you have always carried out your duties as Head of the Public Works Department, and His Excellency would much regret that any misconception or misunderstanding should arise either in your own mind or in the view of the public regarding the appointment of a New Works Branch for temporary and special duties.

R. B. Baseley, Esq.,
Colonial Engineer,
Stanley.

I am,
Sir,
Your obedient servant,
H. Henniker-Heaton,
Colonial Secretary.

(8)

FALKLAND ISLANDS.

No. 91.

GOVERNMENT HOUSE,

STANLEY,

2nd October, 1924.

Sir,

In continuation of my despatch, No. 75 of the 14th of August, I have the honour to inform you that it has been found necessary to recast completely the scheme for the drainage of Stanley.

2. In the second paragraph of his report on drainage, which formed Enclosure No. 5 to my despatch under reference, Mr. A. A. P. Neave stated that the scheme had been designed in such a way that use would be made of "the existing grips, culverts and drains wherever practicable, principally for dealing with storm water; the primary object of the new sewers being to take domestic and offensive water underground in accordance with modern practice." With one exception the existing grips and channels were not shown on the drawings which accompanied the report.

3. Mr. G. Roberts, who had been recommended by Mr. Neave to carry out the Improvement Works, after going through the plans and over the whole of the proposed scheme with Mr. Neave, reported that he was not prepared to proceed further, and

that/

THE RIGHT HONOURABLE

J. H. THOMAS, P.C., M.P.,

SECRETARY OF STATE FOR THE COLONIES.

that he preferred not to make himself responsible for carrying out a drainage scheme which would not, in his opinion, give satisfaction or materially improve existing insanitary conditions. The main grounds on which Mr. Roberts based his opinion were that

(1) Practically all the open channels and ditches throughout the town were to be retained to carry away surface water, with which the watertight underground drains could not cope: the channels and ditches were in a most unsatisfactory state and no provision whatever had been made for improving them. In this connection it should be observed that when Mr. Roberts drew attention to the most insanitary condition of the channels and ditches, Mr. Neave admitted the necessity for their improvement, but stated that the funds allocated to drainage did not permit of the work being carried out.

(2) The cost of house connections to the sewers in the restricted area of the town in which sewers were to be laid, would be heavy and in many cases beyond the means of the occupants of the houses, involving as they would, in addition to drain pipes, "at least one yard gully with grating and properly trapped and with cleaning eye, with hinged grating and lock and with an inspection chamber and trap." (Paragraph 11 of the report): the people would through ignorance and carelessness cause much trouble and expense by the misuse of these sanitary arrangements until they had been educated into better ways.

(3) The funds set apart for the roads were not sufficient even for complete re-surfacing and would be wholly inadequate for "making up" and regrading the roads in order to permit of the road gullies, which were provided in the scheme, being brought into effective use up to the limited capacity of the underground drains as designed.

(4) The use of the existing outlets to the sea-wall for carrying off surplus storm water and sewage by flood reliefs, as proposed in paragraph 6 of the report, would be to perpetuate an evil, as sewage would continue to be discharged on the foreshore.

4. After a thorough inspection of the town with Mr. Heave and Mr. Roberts and keeping in view the principle that any work undertaken should be capable of extension to conform ultimately with all modern sanitary requirements, I have come to the conclusion that the following works, which constitute the minimum requirements of the town, should be proceeded with at once :

(a) The three main sewer outfalls of cast iron pipes should be constructed.

(b) Main drains should be laid in Ross Road and John Street, the two roads which are nearest and run parallel to the foreshore.

(c) Main drains should be laid in roads running north to south at selected points to be determined later.

(d) The existing channels and ditches should be regraded and lined to carry slop and surface water to the main drains, the details of this

work being decided on after further investigation by the Executive Engineer.

5. I am advised by the Colonial Surgeon, who is also Chairman of the Board of Health, that the above works, if arrangements are made for flushing the open channels with water from the fire hydrants, which are included in the scheme for a water supply, provide all that will be required on sanitary grounds for a number of years, and that the works will, in fact, be considerably more satisfactory than a complete underground watertight drainage system placed at the disposal of a population which is profoundly ignorant of the most elementary principles of modern sanitation.

6. I am glad to be in a position to add that, as the result of further discussion with Mr. Roberts, he is prepared to carry out the Improvement Works for the Town of Stanley on the understanding that the drainage scheme is recast on the lines which I have indicated in this despatch.

7. Lest it should be inferred that the considered advice of the Consulting Engineer is being discarded without due justification, it may be observed that the issue does not in reality constitute a difference of opinion on any technical engineering point. Certain channels and gutters have to be graded and lined and certain drains have to be laid. The question to be determined is whether the Colony shall aim at a complete system of underground drainage, which it could not afford, for surface and slop water only, or shall make the best use of the funds at its disposal by expending them on a comprehensive

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but less ambitious scheme. It may be observed that Mr. Neave admitted, on the occasion of my inspection of the town with Mr. Roberts and himself, that the former's objections to the scheme as planned were perfectly sound, but he pleaded insufficient funds for remedying the defects.

I have the honour to be,

Sir,

Your most obedient,

humble servant,

J. Middleton.



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Incomplete
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DUPLICATE.

FALKLAND ISLANDS.

No. 107

DOWNING STREET,

October, 1924.

Sir,

With reference to your telegram of the 15th October I have the honour to transmit to you a copy of correspondence with the Crown Agents for the Colonies regarding the proposed improvement works at Stanley.

2. In view of the desirability of avoiding a possible subsequent delay I thought it desirable to send my telegram of the 24th October enquiring as to the analysis of water samples from the proposed supply from the Mount William Stone Run as no report on samples from this particular source appears to be included in appendix I to the report enclosed in Mr. Henniker Heaton's despatch No.30 of the 17th March last, although I observe from paragraph 5 of enclosure 4 to your despatch No.76 of the 14th August last a sample from this source has been taken for examination.

I have the honour to be

Sir,

Your most obedient,

humble servant,

(Signed) J. H. THOMAS

GOVERNOR,

J. MIDDLETON, 2nd., K.B.E., C.M.G.,

etc., etc., etc.,

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DOWNING STREET,

24 October, 1924.

Gentlemen,

I am directed by Mr. Secretary Thomas to acknowledge the receipt of your letter of the 15th October (E 367.8) relative to the proposed improvement works at Stanley, Falkland^{Island}, and to transmit to you, for your information, a copy of further telegraphic correspondence with the Governor, to whom a copy of your letter is being sent by despatch.

2. I am also to enclose for your information, a copy of a confidential despatch from the Governor regarding the proposed employment of Mr. George Roberts as Officer in Charge of the proposed works. The Lords Commissioners of the Admiralty have been asked whether Mr. Roberts may be allowed to accept such employment but no reply has yet been received.

3. You will of course consult this Department in regard

THE CROWN AGENTS

FOR THE COLONIES.

Fr. Gov. tel.
15th Oct.

To do. tel.
24 Oct.

Fr. Gov. Conf.
16th Aug.

regard to the orders for material when received.

I am,

Gentlemen,

Your most obedient servant,

(Signed) G. GRINDLE

15th October, 1924.

Sir,

I have the honour to acknowledge the receipt of your letter No. 44589/1924 of the 8th October transmitting copy of a despatch with enclosures from the Governor of the Falkland Islands regarding proposed improvement works in the town of Port Stanley.

2. A total expenditure of £30,000 is suggested to cover the following works :-

(1) Water supply.....	£. 15,000.
(2) Plant.....	2,500.
(3) Provision of incinerator....	1,000.
(4) Drains and roads.....	11,500.

TOTAL.....£30,000.

9.1.1924.

In connection with the proposed water supply we should, perhaps, point out that in the early part of this year we prepared, at Mr. Middleton's request, an estimate for supplying water to Port Stanley and we enclose a copy of a letter dated 9th January which we addressed to the Colonial Secretary, Falkland Islands, regarding this matter. The scheme for which we prepared an estimate provided for the collection of water at a spot called Saddle Hill but Mr. Neave has since found a suitable supply somewhat nearer to the town. We have checked Mr. Neave's estimate so far as we are in a position to do so and consider that it should suffice to carry out the work intended. We should, however, point out that samples of the water from the proposed source of supply do not yet appear to have been analysed

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The Under Secretary of State,

COLONIAL OFFICE,

S.W. 1.

and we consider it is important that this should be done before the work is put in hand.

3. With regard to the proposed expenditure of £2,500 for plant no details are given of the plant which it is proposed to purchase and we are not therefore in a position to comment on the proposed expenditure.

4. We consider that an incinerator of sufficient size to deal with the refuse of Port Stanley can be purchased for the amount allowed, namely £1,000.

5. We have checked the estimate for providing storm water drains and improving the roads so far as the cost of materials furnished from this country affect it and find that the amounts allowed are fair and reasonable. We should, perhaps, point out that the drains which it is proposed to construct will, except in a few instances, deal with surface water only at present although their lay-out has been designed to fit in with a subsequent system of house drainage. The expenditure proposed appears to be somewhat large for the provision of a system of storm water drainage only unless conditions are of an exceptional character, but presumably it is regarded as the first instalment of a complete system of sewerage and, in such circumstances, the proposed expenditure can, perhaps, be justified.

I have, etc.,
(Sd.) W. A. F. Wickhart,
for Crown Agents.

MINUTE FROM THE GOVERNOR, No. 7 of 1924.

IMPROVEMENT OF THE SANITARY AND ROAD CONDITION
OF STANLEY.

The Governor has the honour to invite the attention of the Honourable Members of the Legislative Council to the proposals which have been under consideration for the improvement of the sanitary and road condition of Stanley. A promise was made at the last meeting of the Council that when the investigations were completed, reports on the works proposed would be laid before the Council.

The Government has, after protracted examination of the requirements of the town, arrived at the conclusion that a supply of pure water is of primary importance, then follow drains, road-making, the provision of an incinerator for sanitary service, and of the plant for the execution of the works.

It was manifestly impossible on financial grounds to adopt projects on a scale which would have brought the conditions of the ^{town} ~~town~~ to the perfection attained by wealthy communities in other countries. Mr. Neave, who was appointed Consulting Engineer to the Government, submitted proposals in a preliminary report which would have involved an expenditure of not less than £75,000. This was far beyond the limited resources at disposal. The total surplus balances of the Colony which are available at this date amount to little more than £44,000. A careful review of the financial position allowed of the conclusion that the most that could at present be allocated to works for the improvement of Stanley was £30,000. It was found that the provision of a reliable water supply was impracticable for a lower sum than £15,000, leaving £11,500 to be expended

on roads and drains, \$1,000 on an incinerator and \$2,500 on plant. Schemes for procuring water from the Mile Pond, from Sappers Hill, from Saddle Hill and from Moody Valley were all investigated in turn and discarded. Resource was then had to proposals made by Mr. Messervy in 1901 for a water supply from the Mount William Stone Run. Mr. Heave had considered and rejected this source of supply on the ground of the small amount of water found by him at this run at the end of a dry spell in 1922. His object at the time he made the investigation was to obtain a supply of not less than 30,000 gallons a day, or 30 gallons per day per head of the population of Stanley throughout the year. As it must be a considerable time - probably many years - before a complete waterborne sewage system for the town can be considered a practical project, it must suffice for present requirements if a minimum supply of seven thousand gallons per day can be secured after prolonged drought. To guard against the event of the failure of water from the Mount William Stone Run following a dry spell, it is proposed to construct two storage reservoirs with a total capacity of 350,000 gallons. Sufficient water would then be held in reserve to meet a drying up of the source for a period of fifty days. We have been fortunate in one respect in the recent dry weather, which has caused such general inconvenience to the people of Stanley, for whose benefit water has on several occasions had to be transported for a distance of five miles by boat. The proposed source of supply has been thoroughly tested for quantity. The total rainfall in Stanley in the months of August to October inclusive was under three inches, the mean daily fall being .05 of an inch in August, .01 in September and .02 in October, as against an average over 26 years of 2.03, 1.43 and 1.49 inches in the same months respectively. Gauge boards have shewn that at no time during
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the drought has the total supply fallen below five gallons a minute or 7,500 gallons a day. The capacity of the main and the proposed filter will enable 30,000 gallons a day to be delivered and for the greater part of the year the supply should not fall far short of that quantity. The water is believed to be of good notable quality. Samples have been taken and sent to the United Kingdom for analysis. It is intended that house connections should be provided at the expense of the occupants of houses at their request, if they desire them. Under the scheme now submitted, the supply will be gravitational, the water being carried for a distance of three miles to the dairy paddock where two reservoirs will be constructed at a height of 130 feet above sea level. It is to be regretted that it will not be possible to provide facilities for house connections to the people living on the high ground above the level of the reservoirs. To meet their requirements in time of drought, and those of the people in other parts of the town who are unable to afford private house connections, six street fountains will be provided at suitable points. For protection against fire a number of fire hydrants will also be supplied. It is estimated that the pressure at Ross Road will be sufficient to throw a jet of water over the Town Hall.

The drainage works proposed are :-

- (a) Three main sewer outfalls of cast iron pipes.
- (b) Main drains to be laid in Ross Road and John Street.
- (c) Main drains to be laid in certain of the roads running south to north.
- (d) The existing channels and ditches to be regraded and lined to carry surface and slow water to the main drains.

The roads will, as far as funds permit, be regraded resurfaced and made up where necessary.

Part of the plant has already been purchased from the Admiralty. It is proposed that a steam road roller

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and motor lorry should also be obtained for the works.

The total expenditure, including liabilities, to the present date on the schemes for the improvement of Stanley amounts to £2,950. This includes a fee of £300 to the Consulting Engineer and all minor incidental expenses in connection with his investigations. It also includes a sum of £1,240 for plant and material bought from the Admiralty, but not paid for pending the accounts being passed in London. It has been possible to effect considerable economy by purchasing second hand material. Only such works have hitherto been taken in hand as will be necessary under any scheme which may be adopted.

The approval of the Council is now sought for the improvement works outlined in this minute and for the appropriation from the surplus balances of the Colony of the monies required for carrying the works to completion. The Council will be invited at a later stage in the present session to vote the specific sum of £15,000 for expenditure in this connection during the coming financial year.

J. Middleton.

(11)

TELEGRAM.

From : The Secretary of State for the Colonies.

To : His Excellency the Governor.

Dispatched : 7th January,

1925. Time. 2.50
pm

Received : 10th January,

1925. Time. 10.45
am

GOVERNOR

PORT STANLEY

FALKLAND ISLANDS.

YSOCUMALYV ARFAMUJUR EZAKPYWTY AILCVOSZUB
LUPSOLROYZ JIFGYALLUK BBAOKEJWAR TUGYJIBYTA
AFSADAINEC FIUOFPRUMO IUMMATUGH ISSERADIPA
CAUGY LEGARTO LEBRKYCZE KARKAJPCA SEGER.

Meaning:

With reference to your despatch of 2nd October 91 approve modified drainage scheme and in view of provision Legislative Council in the estimates an authorizing Crown Agents to proceed. Admiralty agrees to employment of Roberts hope to be able to arrange passages for him and accountant by Legarto leaving 7th February if accommodation is available.

Secretary of State for the Colonies.