C.S.

STANLEY IMPROVEMENT SCHEMES.

No. 520/24.

1924.

The Governor.

SUBJECT.

1924

5th August.

Proposed Water Supply ex Mount William Stone Run.

Previous Paper.

MINUTES.

Minute from the Governor 5th August, 1924 Encl. (1)

Report by Mr. A. A. P. Neave, 4th August, 1924. Encl. (1a)

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

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

Clerk of the Executive Council.

Reported to the Secretary of State - Vide Encl. 6 M. P. 257/23.

M.P. 398/24

To Mr. G. Roberts 10/9/24 with 2 plans showing mains in Stanley and plan of ~~reservoirs~~ service tanks Sheet 1. 2 & 3 G.R.L. 10/9/24

Subsequent Paper.

P.A. 5/5/30

1

From His Excellency the Governor

to The Honourable the Colonial Secretary.

I propose to take this report at meeting of Executive Council on Friday 8th August: it is not necessary to circulate it.

2. You have not seen report of 21st July in 707/23: it was read at a meeting of Ex: Co: held on 25th July: I have made a note of explanation to this meeting in 465/24.

3. There is a paper containing a report from Col: Surgeon on water (see para 6 of my note in 465/24) which was referred back to Colonial Surgeon: will you please obtain it from him before 8th August.

[illegible]

5 August 1924

P.S. Other papers relating to Stanley improvements are with me.

2. A 3" main from intake to reservoir is sufficient for Note filter recommended by [illegible] Vickers [illegible]: capacity of filter is 41,000 galls per day: capacity of 3" main is 43,000 galls per day. This information has been obtained from [illegible] today.

[illegible]

5 August 1924

88—17/4/24—200.

(17)

Port Stanley,

FALKLAND ISLANDS.

4th August, 1924.

STANLEY IMPROVEMENT SCHEME.

Proposed Water Supply ex. Mount Sullivan Stone Run.

Sir,

With reference to the question of water supply for Stanley and the several alternative schemes which have been discussed with His Excellency and yourself and the desire expressed that some form of water supply shall be provided at a comparatively low cost, I now beg to forward the following report on the possibility of a modified supply from the Mount Sullivan stone run situated at the head of the harbour.

2. The question of a supply from this source appears to have been raised about 1901 by Mr: Emery, the Engineer now dead for a scheme with a fairly extensive service of town mains. No report on this subject however can be found and it does not appear that the matter was pursued at any length, possibly it was allowed to lapse for financial reasons or on account of the difficulty of execution of such a scheme with local resources.

The plans above mentioned however only provide for a shallow dam across the stone run and a storage capacity of slightly more than 2 day's reserve near the town based on the capacity of the main pipe line designed to carry 30,000 gallons per day (presumably 30 gallons per head per diem for a population of 1,000) and it would therefore appear that either the tanks were designed as service reservoirs on the assumption that the water coming down the stone run would continue to supply the full amount of water throughout the year or else that they were designed merely as storage tanks for flushing and fire purposes and emergency supply at times of drought.

As the water coming down the stone run is stated by the tenant of the adjacent farm (who has used the water for potable purposes for over 30 years) to practically dry up during times of drought the latter would appear to have been the more probable intention.

3. I visited this stone run during the very dry spell experienced at the end of 1922 and found only a very small amount of water running, and accordingly rejected this source of supply (vide paragraph 21 of my preliminary report dated February, 1923) in favour of the Sapper Hill Scheme, which was designed as a

comprehensive

comprehensive scheme for an adequate supply to the town at an estimated cost of £34,000, the whole of the works being situated largely for constructional reasons as near the town as practicable.

4. In view of the limited funds now available for public works I consider that the question of an adequate supply based on 30 gallons per head of population per day must be abandoned at any rate for some years until such time when and if considerably more funds are available, but that a scheme of modified supply based on an allowance of say 7 gallons per head per day to be drawn mainly from street fountains is within the present financial means of the Colony.

5. His Excellency has shown a very keen interest in the question of evolving a water supply scheme for Stanley ever since my appointment as Consulting Engineer, and, having previously visited other sites with me, visited the Mount Pillar stone run with me and Mr: Roberts of my staff yesterday. As might be expected after the recent snow fall and thaw a very large amount of water was coming down the stone run. This was measured roughly by canvas board and I estimate the quantity as some 200 gallons per minute or about ten times the rate required to supply Stanley with 30 gallons per head per diem.

The water is odourless and tasteless and clear but tinged with a pale brown stain from peat and I consider it to be a suitable water for potable purposes; but this must be confirmed by medical opinion for which purpose a sample was taken. Probably during times of lesser flow the peat stain will be less evident, but I think it must be conceded that such water even in its crude state is infinitely preferable to the insanitary system of roof supply at present in operation in Stanley.

6. The works which I now propose in order to provide a gravitational supply for the town from this stone run consist of the construction of a small masonry dam across the stone run at a point roughly 220 feet above high water which is somewhat higher than formerly suggested by Mr: Reserve, and the construction of a small settling tank nearby and the provision of say roughly a mile (or more) of new fencing to keep animals away from the supply. From this settling tank a 3" diam: cast iron main some 3 miles in length will convey the water to a storage reservoir to be situated close to the town in the Dairy Paddock (or nearby) at an elevation of roughly 150 feet above high water. A pressure filter of the Archers drifting sand type in suitable house being installed on the rising line on the inlet side of the storage reservoir and lime should be introduced at this filter as the water is deficient in lime; it may also be desirable to add alumina for the more efficient working of the filter.

From the storage reservoir a system of mains in selected streets will supply the bulk of the town omitting the upper portions on the score of expense. The intake works and 2 miles of 9" main from the source to the reservoir will however lend themselves to extension to a higher level reservoir to feed the upper reaches of the town should funds be available at a later date.
The street mains should be fitted with a series of fire hydrants and street fountains somewhat on the lines shown on my drawing for the Ville Bond scheme (vide my report dated 30th April, 1934) and it will also be possible to make a certain number of house connections.

7. The size of the storage reservoir is one which requires consideration and it will be advisable to take periodical observation of gaugings across the stone run especially during the dry season to determine the reduction in the amount of water available at such times.
On the present information I have estimated for a storage reservoir to hold 40 days supply at 7 gallons per head per day taking the population as 1,000., which last figure allows a margin of roughly 10% on the present population. This should suffice for ordinary requirements but should future developments or the question of fire reserve or water supply to ships warrant future extension it will be simple to incorporate a further reservoir or reservoirs. The reservoir must be constructed in two divisions to allow of periodical cleaning to be carried out regularly during the wet seasons when water will be plentiful.

8. It will also be necessary to provide the farm tenant at Woody Valley with consumption water from the new dam across the stone run unless arrangements are made for him to draw his supply from the spring situated to the eastward which he uses at times of drought.

9. The estimated cost of this scheme is £15,000, and I attach basis of estimate showing the various branches of the work.

10. Whilst it is not possible with the funds available to provide a proper house to house supply throughout the town the execution of the modified scheme now put forward should certainly effect a very great improvement on the present insanitary and unsatisfactory system of roof supply

and

and also overcome the serious shortage of water so frequently experienced by the inhabitants after comparatively short periods of dry weather; and having regard to local circumstances I recommend that it be adopted.

I am,

Sir,

Your obedient Servant,

A.R.S. Mears

A.R.S. Mears. Assoc: M. Inst: C.E.
Chartered Civil Engineer.

The Honourable,

The Colonial Secretary,

STANLEY.

Enclosure.
Basis of Estimate.

SEALEY IMPROVEMENT SCHEME.

Proposed Water Supply ex. Mount Allin Stone Dam.

BASIS OF ESTIMATE.

		£.
5 miles	5" Cast iron main, laid complete. £1500 mile.	7,500.
	Allow for dam foncing and intake works.	500.
	Fire hydrants, public fountains meter and stop valves, etc:.	400.
	Connections to public buildings.	250.
	Filtering plant and house.	1,000.
	Reservoir.	2,750.
		£12,400.
	Contingencies. 10%.	1,240.
		£13,640.
	Administration, Engineering etc:. 10%	1,364.
		£15,004.

SAY £15,000.