

UR 1937/11

REPORT ON DAM SITE FOR KINGSTON WATER SUPPLY

An examination was made to ascertain if there were any adverse geological conditions at the proposed dam site in connection with a water supply for Kingston.

The site is situated  $2\frac{3}{4}$  miles west-north-west of Kingston township in the valley of Fawcett Rivulet, about half a mile above its junction with Browns River.

Solid dolerite is exposed in the creek bed for many chains above and below the proposed position for the dam. At the latter point, where the sides of the valley are moderately steep, the bed rock is not exposed but boulders of dolerite distributed over the surface to a height of 100 feet or more above the valley floor denote the presence of solid dolerite at shallow depths.

A series of 7 pits have been excavated along the line of proposed dam wall, extending across Fawcett Rivulet & rising to approximately 40 feet above the stream. Four pits on the south side have bottomed on dolerite at depths ranging from 4 to 10 feet. On the north side the same rock is exposed in two pits at depths of 2'6" and 14' respectively below surface, the latter being about 25 feet above the creek bed. A third pit is at present being sunk above this, and although bedrock is not yet reached, large dolerite boulders are present at a depth of 6 feet and solid rock should soon be reached.

It is conclusive that a solid dolerite bottom can be obtained for the dam foundations at shallow depth.

The dolerite is a hard resistant rock which should provide strong and durable foundations. Erosion of the rock downstream would be slow and unlikely to affect the permanence of the dam. It is also an impervious rock and resists the passage of water through it.

Jointing is present in the rock near the surface and may cause a slight leakage, but it is not anticipated that any serious defects will be found.

After excavating for foundations the nature of the joints should be noted, if they are open at any point, slightly deeper trenches should be cut at those places.

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