

Basic Assessment for the Expansion of Bulk Water Supply Riebeeck Wes Prison

As the legal entity in control of the land the Department of Public Works proposed to upgrade the bulk water storage capacity of the Riebeeck Wes Prison in line with the wishes of the Department of Correctional Services in the Western Cape.

Currently the Riebeeck Wes Prisons bulk storage capacity is provided by two old and dilapidated reservoirs and this capacity needs to be increased to 500m³ to supply the prison with the recommended 48 hours by constructing a new reservoir on Farm 641/4 directly adjacent to and upslope of the existing reservoirs. The existing reservoirs will be replaced by a single reservoir. The expansion did not constitute an increase in water demand by an expansion of water storage capacity for emergency supply in an instance where water services may be interrupted to the prison.

It was proposed that a circular reservoir with a diameter of 15 040mm is constructed in the open area adjacent to the old reservoir. The height of the proposed reservoir will be 3500mm with a wall thickness of 520mm. The concrete flooring will have a building layer of 80mm and a floor thickness of 175mm of reinforced concrete. The reinforced concrete roof 175mm and the internal floor of the reservoir will have a convex surface with a radial fall of 75mm for the roof and 100mm for the internal floor from the centre of the reservoir to the outside. Drainage points on the roof are located at strategic points and the top edge of the reservoir is shielded with a precast concrete coping. Three air vents will be installed in the roof. Water from the interior of the reservoir will be fed through an outlet pipe to a chamber recessed below the level of the floor.

The proposed expansion of the storage capacity did not require extensive additional pipeline infrastructure either in terms of the water supply or the reticulation to the prison itself and will tie directly into the current supply and reticulation pipelines that service the prison.

The application was successfully concluded and an Environmental Authorisation issued.