

## **Basic Assessment for the Expansion of Bulk Water Supply Paardeberg 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 Paardeberg Prison in line with the wishes of the Department of Correctional Services in the Western Cape.

Currently the Paardeberg Prisons bulk storage capacity is 350m<sup>3</sup> and this capacity needed to be increased to 500m<sup>3</sup> to supply the prison with the recommended 48 hours by constructing a new reservoir on Farm 171/4 directly adjacent to the existing reservoir. The existing reservoir will be replaced.

It is 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 roof 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 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.