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Your Ref: RA/CS-CR/05/2012

Our Ref: Overview

Contact: C. Mostert

Date: 30 January 2013

Mountain View Estate
P.O. Box 20837
Windhoek
Namibia

Dear Sir/Madam

RE: MOUNTAIN VIEW RURAL RESIDENTIAL ESTATE: OVERVIEW

The elements below describe the key design components of the above-mentioned farmland estate:

ROAD NETWORK

Access to the estate is via road F 1263 which links into the internal road network for the Mountain View estate by means of a T-Junction. This intersection is located approximately 300m from the main B1 road. The internal road will be a 6m wide gravel road. The speed limit in the estate will only be 40 km/h and stormwater structures will be placed strategically to accommodate any stormwater flow that might affect the road.



The centreline of the road being cleared by bulldozer



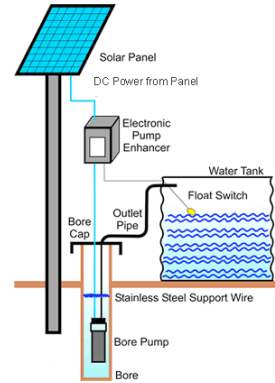
A typical completed gravel road

WATER RETICULATION

Water will be obtained from a newly drilled borehole on the eastern side of the estate. The water will be pumped to an elevated reservoir with a HDPE pipe from where it will gravitate into the water reticulation system. Each erf will have a water connection with a water meter installed. Air, scour and gate valves will also be installed as components of the water reticulation system.



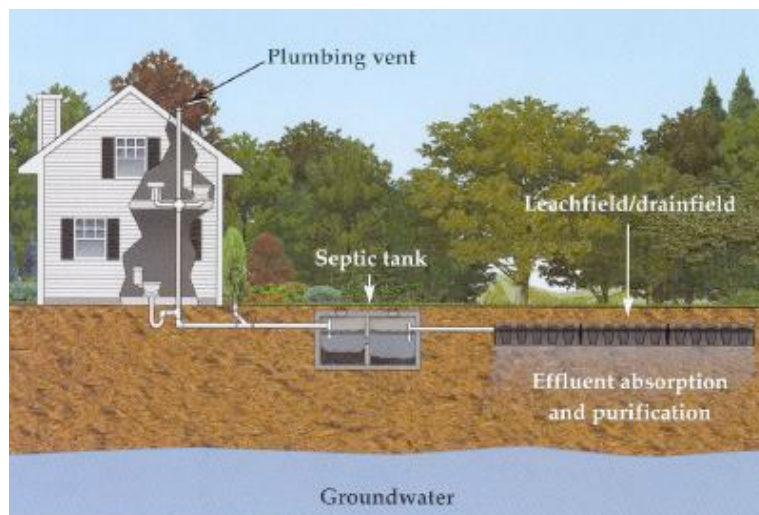
Image of a typical water reservoir



Schematic layout of a typical solar borehole pump

SEWER RETICULATION

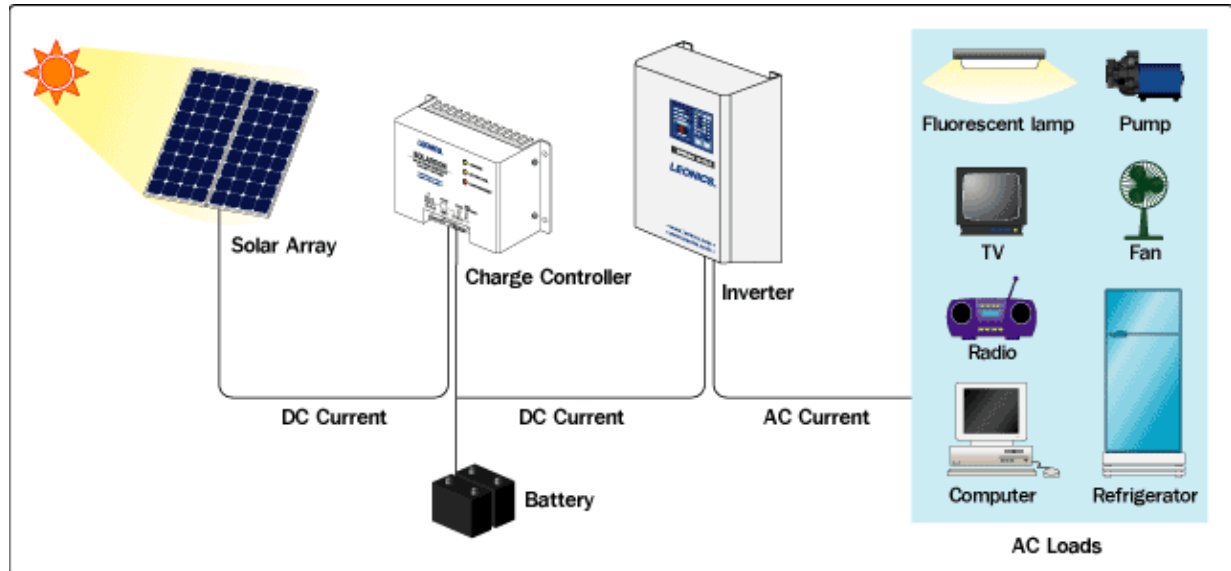
To minimize the effect of construction work on the natural surroundings septic tanks with soakaway drains will be installed for every erf. The septic tanks will be constructed underground using reinforced concrete and will not be visible and will be located up to 20metres away from the house. The grey water (the water left over after the tank has removed the solids, fat and greases) from the septic tank will overflow into a soakaway type drain that is basically a perforated pipe installed underground and surrounded by gravel material which allows the water to soak into the ground with no harm to the environment and without any bad odours. See picture below showing the basic layout of a typical septic drain connected to a soakaway.



MECHANICAL AND ELECTRICAL SERVICES

Electricity Supply

The electricity supply for every erf/house will be via photovoltaic power generation (Solar power). Photovoltaic power generation has recently become a well-known technology in Namibia, rapidly developing over the past few years due to the steep rises in grid electricity costs, high up-front connection charges by utilities and the grid proving to be a fairly unstable source of energy at times with load shedding and power failures being experienced more often in recent times. See below a schematic layout of a typical solar power installation for a house.



The favourable solar regime in Namibia with more than 6 effective sun shine hours a day ($6000\text{Watt}/\text{m}^2/\text{day}$) provides the basis for solar power generation as an attractive and economical alternative to grid electricity.

With an ever growing concern over global warming and the effects on our daily lives, more people become aware of their carbon foot print and are seeking for ways on how they as individuals can positively contribute to the reduction in carbon emissions. Photovoltaic power generation can be considered as green technology opposed to grid electricity generated from burning coal and other fossil fuels. Land owners at the Mountain View Development are being offered the opportunity, with the integration of solar power generation into their home design, to partially off-setting their contribution to carbon emissions in their daily city lives.

The electricity supply for the following elements of the development will be via Solar Power:

- Homes
- Borehole Pumps
- Guard House
- Electric Fence

Communication and data

Communication link and access is already ensured by the existing cell phone network but a local area signal amplifier will be installed that will cover the whole development and ensure good reception.

Access Control

Access control is remote and is facilitated via a cell phone controlled entrance system.

Please do not hesitate if you have any queries regarding the above.

Regards

Cilliers Mostert
for Knight Piesold Consulting Namibia