

PART 1: WATER COLLECTION

Water is always a hot topic on St Helena and over the next few weeks we are going to try and explain how things work and answer a few common questions. The process can be divided into four segments.

 COLLECTION
  STORAGE
  TREATMENT
  DISTRIBUTION

This week we are going to begin at the beginning with how we collect water from the various sources on the island. We will also explain the works currently being undertaken to improve the system and the plans for the future.



Water sources can be simply split into two categories; Surface Sources and Boreholes. Surface sources include streams and springs, and these make up the majority of water collected. This water is collected via Abstraction Points placed at locations where water naturally flows. Abstraction Points are built out of stone, concrete and other natural materials. A well designed Abstraction Point captures as much water as possible and funnels it into pipes and minimises loss. Once collected in this way the water is gravitated through a network of pipes to the reservoirs.



We are reviewing our abstraction points and re-designing them to be able to collect a higher volume of water. Silt traps will be added to aid maintenance and reduce the volume of suspended solids entering the systems.

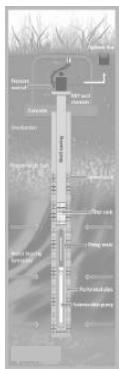
Osborne's Water Catchment



Before



After



We also collect water from boreholes. Under the island there is a network of underground streams or aquifers that mostly contain fresh water. A borehole is where we drill into this network or an aquifer and pump the water to the surface.

Both systems have their merits, however we prefer surface sources over boreholes primarily because of cost. Whilst surface sources can be transported simply by use of gravitational flow, boreholes require a mechanical process to extract the water, which adds to the cost. The additional cost (as much as £1.40 per cubic meter / 1000 litres) is currently absorbed by us, meaning that we lose more money on the water we supply. This loss would then have to be recovered through increased tariffs. So we are always conscious of the cost of pumping from boreholes, although they are excellent backup sources to utilise during periods of low rainfall.



So what about plans for the future? When Connect was formed in 2013 we inherited already aging systems. The majority of our current plans involve renovating, modifying and upgrading these systems. For example there are many old pipes that have been damaged over the years, the plan is to replace them with bigger modern pipes that can carry a higher volume of water. There may be a high cost now but there will be benefits for decades to come.

Water collection systems are constantly being improved to make the most of the rainfall we get. Hopefully this has answered a few of the questions that we get asked on a regular basis.

Next time we will look in more detail at WATER STORAGE!

22nd July 2015

