



Storm Water Recovery System – Western Australia

Amiad commission the first ever Storm Water Recovery system in Western Australia incorporating Aquifer recharge

Background

Several years ago, the Shire of Kalamunda, a province/council in Western Australia located about 25km east of Perth, commissioned a series of reports into their largest sports and recreation facility, Hartfield Park. The 2010 Hartfield Park Master Plan and 2011 Community Facilities Plan identified the need to increase playing space here in order to develop the resource for the local community. Featuring sports like golf and hockey, the irrigation of the land the site was set on was viewed as key to an expansion being able to take place.



The Challenge

The aforementioned plans identified the need to increase the playing space, and recommended that an alternative water source be identified to ensure the long-term sustainability of the park. Due to the unique and challenging topography, environment and conditions in Australia, this required an idea that went beyond a standardised system. This is where the concept of harvesting valuable storm water from the on-site Water Corporation Woodlupine main drain (pictured below) came from. This, normally being channelled away into the urban run-off system, was seen as an opportunity to be able to keep the increased area of the park irrigated throughout the seasons of the year and through the various climatic changes experienced here.



Varying particle sizes



Challenging topography



Challenging climatic conditions



The Solution



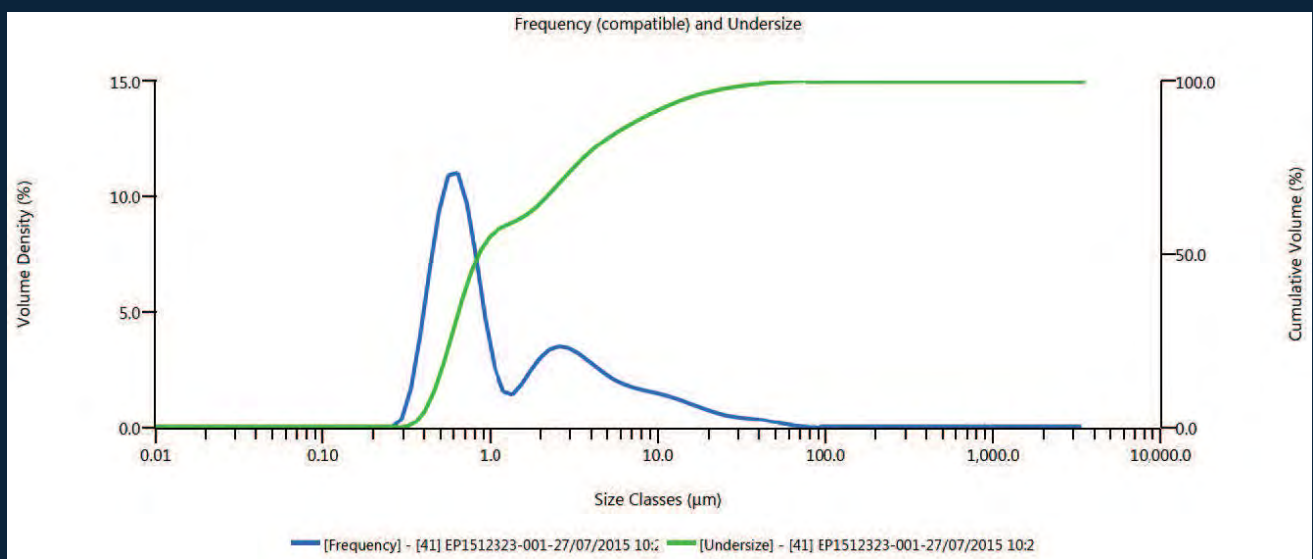
The Amiad system in place at Hartfield Park

We were pleased to be chosen as the supplier of the filtration equipment by the successful tenderer, Advanced Pumps from Wangara in Perth, to ensure the quality of the injected water would not contain a volume of suspended solids that could create a degradation of the injection bore and affect the rate or quantity of water being recovered from storage. Due to the varying particle size of the suspended solids that would be contained in the storm drain, a staged filtration system was selected and installed by Advanced Pumps. To remove the heavier, larger particles of 75 micron and above, a TIMEX hydrocyclone was installed, followed by an Amiad SAF4500 automatic electric filter with a 50um screen. The storm water was then to finally pass through an Amiad AMF automatic self-cleaning microfiber filter containing 2um cartridges, before reaching a Granular Activated Carbon (GAC) media filter as the final stage of the treatment train, to remove organic carbon.

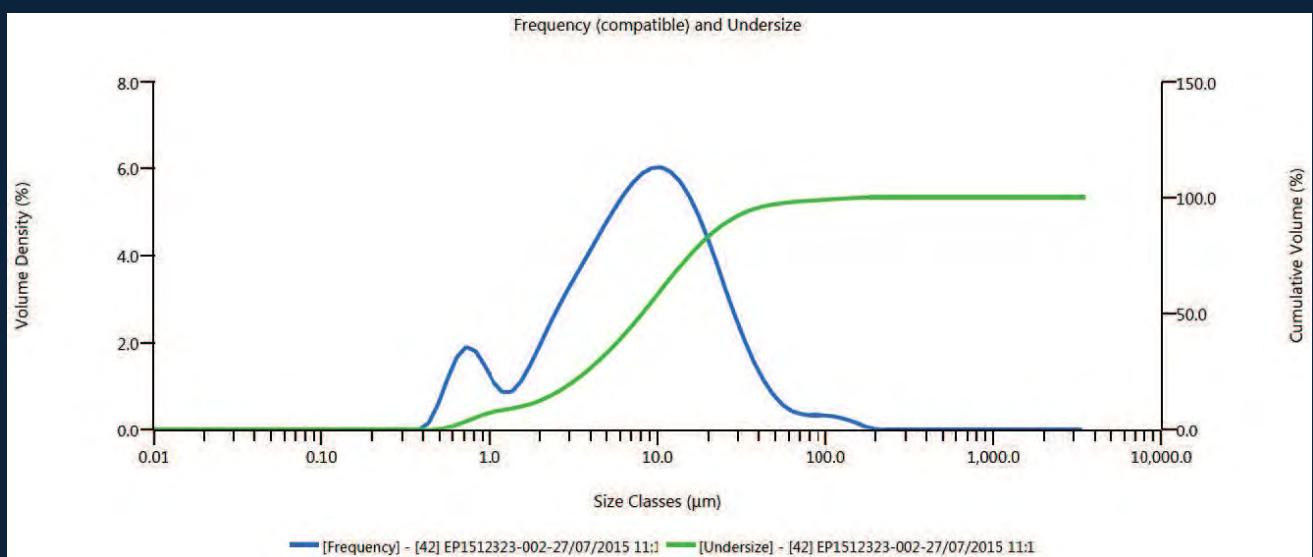
The Results

The site has now been able to grow as planned, offering the valuable space required by the Shire for the expansion of activities and teams at the park, that would have been impossible without this solution being devised. The system currently treats 10 l/s and is designed to treat up to 30 l/s after expansion. As the results show below, the system has responded well to the climatic challenges that Australia provides and has proven an effective solution in utilising the natural resources around the park for the greater good of its development.

INLET

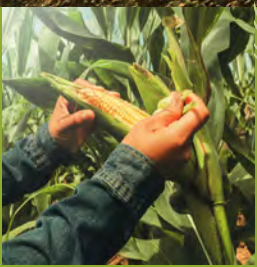
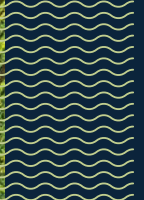


OUTLET



Amiad has now gone on to develop more systems using Managed Aquifer Recharge (MAR) across Australia. Please contact us at sales@amiad.com for more information on how these systems have been implemented.

MASTERS OF FILTRATION



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