CLAIMS

[Claim 1] A water harvesting and flood management system comprising:

a detention tank including an open first drainage orifice, the detention tank being adapted to collect water and release the water at a controlled rate to a drainage system through the first drainage orifice;

a harvesting tank in fluid communication with the detention tank, the harvesting tank being adapted to collect water and release water in a controlled manner to the detention tank;

wherein the harvesting tank includes a drainage arrangement for controlling the release of water from the harvesting tank to the drainage system, and a level sensor for detecting a water level within the harvesting tank, the level sensor triggering the drainage arrangement to allow water to be released to the drainage system when the level sensor detects the water level within the harvesting tank being at or above a predetermined level, the drainage arrangement preventing the further release of water to the drainage system when the level sensor detects that the water level within the harvesting tank is below the predetermined water level;
wherein the detention tank and harvesting tank is separated by a separation wall, such that water from the harvesting tank can overflow over the separation wall to the detention tank, and
wherein a sedimentator for receiving water from a runoff water collection channel and for delivering water to the harvesting tank, with the filter screen being provided between the sedimentator and the harvesting tank, the sedimentator and the filter screen being respectively located on the separator wall.

[Claim 2] A water harvesting and flood management system according to claim 1, wherein the drainage arrangement comprises a second drainage orifice within the harvesting tank through which water can be released to the drainage system, and a valve controlled by the level sensor for opening and closing the second drainage orifice.

[Claim 3] A water harvesting and flood management system according to claim 1, wherein the drainage arrangement comprises a pump system controlled by the level

sensor for pumping water from the harvesting tank to the drainage system.

[Claim 4] A water harvesting and flood management system according to any one of the preceding claims, wherein the detention tank has a volume of about 896m^3.

[Claim 5] A water harvesting and flood management system according to any one of the preceding claims, wherein the harvesting tank has a volume of about 224m^3.

[Claim 6] A water harvesting and flood management system according to claim 2, wherein the first and second drainage orifices have an open area of about 0.13m^2.

[Claim 7] A water harvesting and flood management system according to claim 6, wherein the level sensor closes the second drainage orifice when the water level is about 1.7m.

[Claim 8] A method of harvesting water using a water harvesting and flood management system according to any one of the preceding claims; the method comprising

a) delivering water to the harvesting tank;

b) triggering the drainage arrangement when the level sensor senses the water accumulated within the harvesting tank is at or above a predetermined level to thereby drain the water to a drainage system;

c) releasing water from the harvesting tank to the detention tank if the water level within the harvesting tank continues to rise so that the water within the detention tank can be drained through the first drainage orifice to the drainage system; and

d) stopping the drainage arrangement when the water level within the harvesting tank falls back to below the predetermined level.