



Iascach Intíre Éireann
Inland Fisheries Ireland

ShRBD Green Team

Installation of Rainwater Harvesting System in Listowel, Co. Kerry

Pilot Project carried out by:

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Introduction

This initiative is part of Inland Fisheries Ireland's Climate Action Programme and meets the climate action objective of the Shannon RBD, 2020 Corporate Plan. The installation of a Rain Water Harvesting system was included in the requirements and outputs section of the High Level Corporate Objective 5 (Climate Action, Corporate Governance and Assurance).

The National Green Team had recommended a Rain Water Harvesting Pilot Project and the Listowel base in Co. Kerry within the Shannon River Basin District was chosen to trial this system. The National Green Team based this decision upon recommendations from the Departments public service innovation fund feedback.

Water covers 71% of the planet but only 1% is available to us as drinking water. We share this precious resource with every animal and plant on Earth as well as using it every day in our homes and businesses.

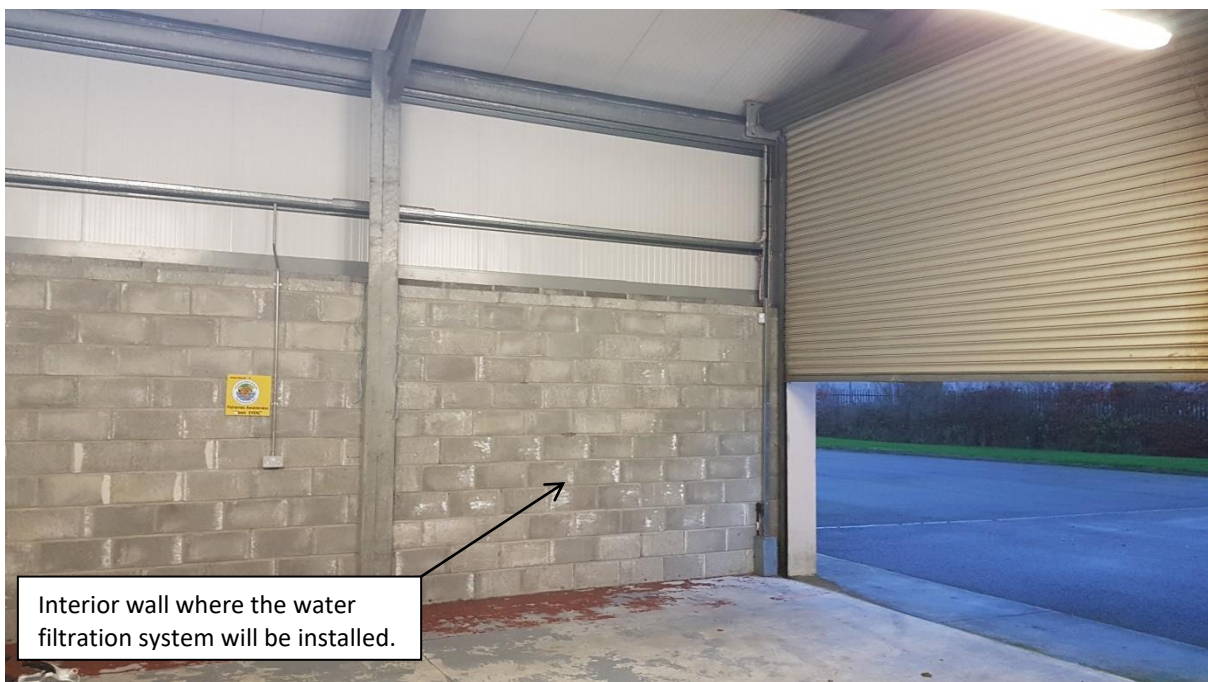
There is a substantial annual rainfall levels here in Ireland but we are limited by how much water we can take from the environment.

Rainwater harvesting is a sustainable process that helps in preserving water for future needs. Rainwater harvesting is the process of accumulation and storage of rainwater for reuse rather than allowing it to runoff. Water scarcity is a major concern in different parts of the world including Ireland. As recently as July 2020, there was a six week period where a hosepipe ban was introduced. Water demand had outstripped supply. The potential for water outages had been forecasted as water schemes were at drought levels.

Fresh, clean water is a valuable resource. Water conservation encourages the efficient use of water and reduces unnecessary water usage which positively benefits the environment. The installation of the rain water system reduces the environmental impacts associated with the resources required including water infrastructure systems and water treatment plants.

The Building

It was decided to install a Rain Water Harvesting system in the IFI base located in Listowel Co. Kerry. There is a large storage building that is used for storing boats, trailers and the seagoing Delta RIB for the Shannon River Basin District. This building was the most suitable as the downpipes were located in a suitable position for the installation of the water tank with access to the yard area to be used when power washing equipment and machinery. It was calculated that one side of the roof would generate approximately 62m³ of rainwater per annum.



Rain Water Harvesting

Research was carried out on the requirements needed and a specification for a suitable system was drawn up. It was decided to install a basic rainwater harvesting system that could be used predominantly to power wash equipment such as vehicles and the sea going Delta RIB. A number of potential suppliers were contacted and three quotes from three suppliers were attained.

A company called Rainwater Harvesting Systems Ireland were chosen to supply and install a rainwater harvesting system to the required specification. The total cost of the system was €3932.77 including VAT.

Installation of Rain Water Harvesting System

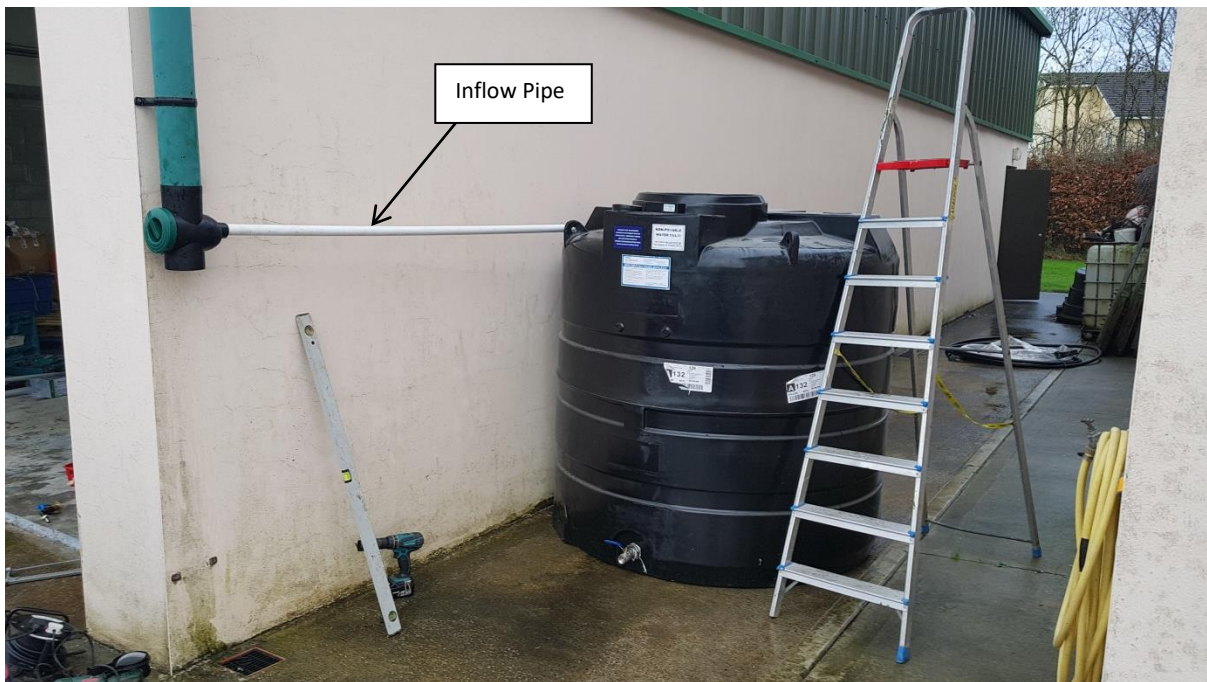
Rainwater tank with a capacity of 2700 litres and measurements of 1.5 meters in height and a diameter of 1.6 meters in width.



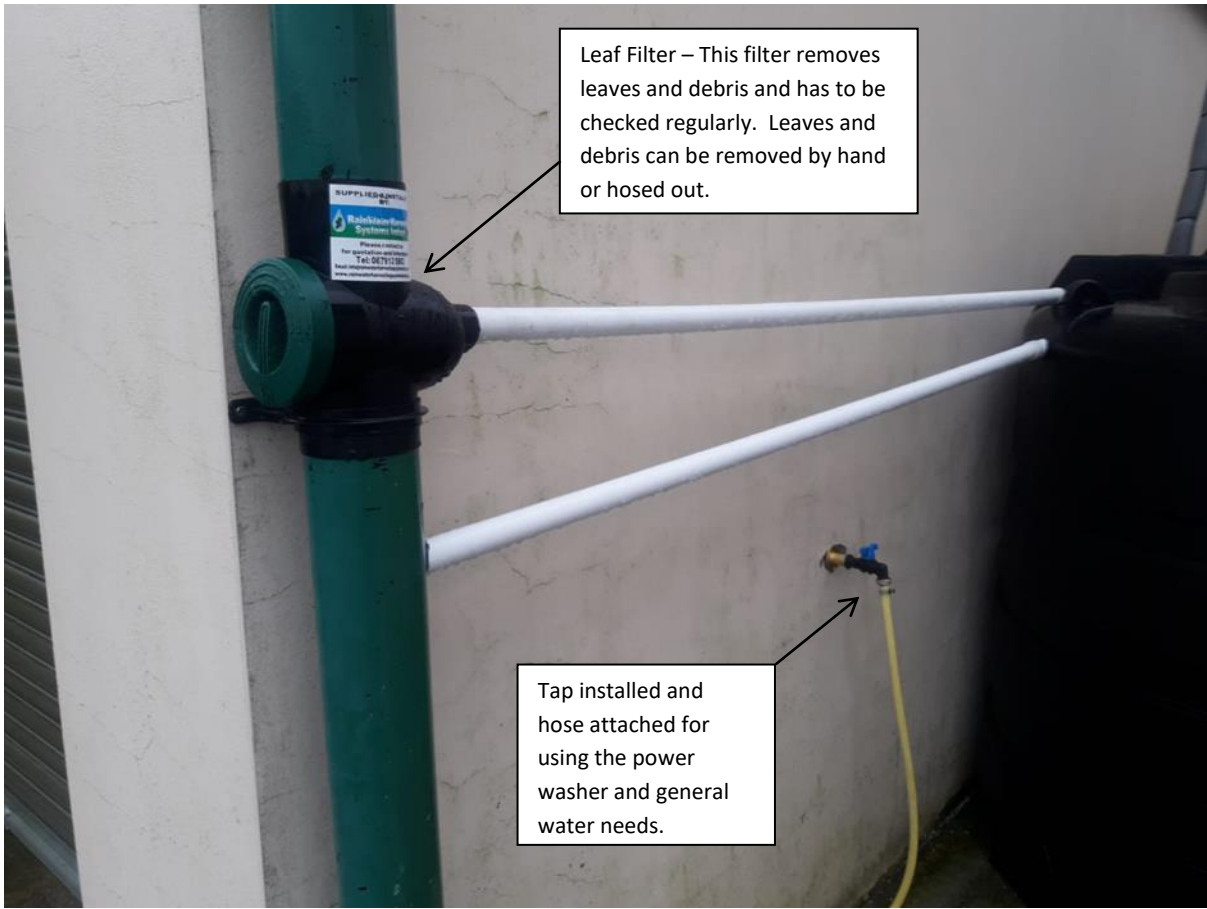
Positioning of tank 1.5 meters from front of building.



Cutting of Downpipe and installation of Leaf Filter





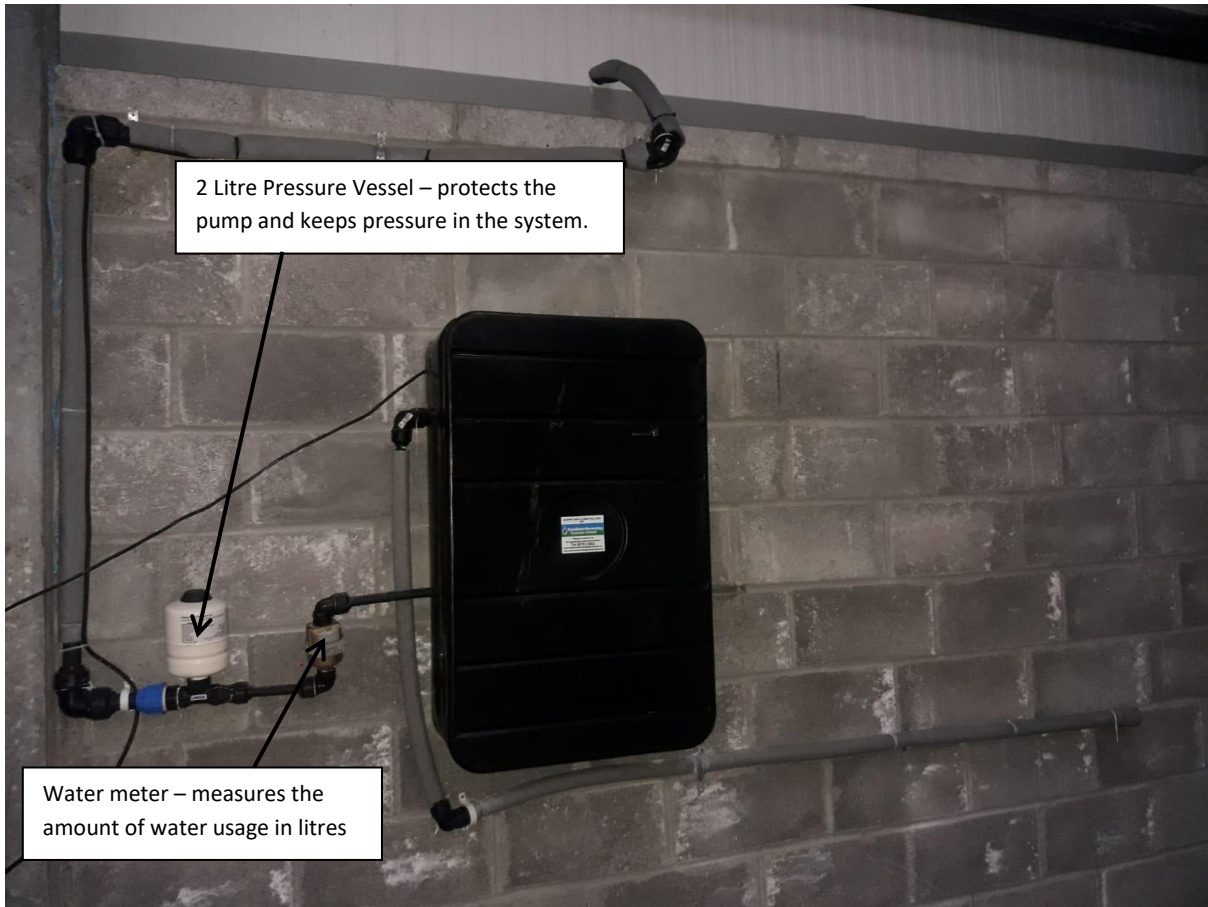


Leaf Filter – This filter removes leaves and debris and has to be checked regularly. Leaves and debris can be removed by hand or hosed out.

Tap installed and hose attached for using the power washer and general water needs.

Filtration Unit





2 Litre Pressure Vessel – protects the pump and keeps pressure in the system.

Water meter – measures the amount of water usage in litres

Testing of System with Power Washer

This system was tested out on the 21/12/2020 by washing a Mitsubishi Pajero with a power washer. It ran perfectly and used approximately 200 liters of water.

At the end of the year, the volume of water used will directly represent the volume of water that was not utilised from the Water Treatment Plant in Listowel. The environmental benefits of the installation of this unit will be better understood at the end of the year for the Listowel field operations base.

Conclusion

This pilot project is comprised of a green approach to improving and enhancing water conservation within Inland Fisheries Ireland while making a positive contribution to climate change.

As an environmental agency involved in environmental management and water quality it is important that Inland Fisheries Ireland continues to engage in projects that have a positive impact on the environment and wider community which meet the obligations of Irelands Climate Action Plan 2021 - 2025.

Rainwater harvesting systems have a very important role in water conservation and it helps to reduce the demand from local water treatment plants for routine work activities. This pilot project has made a positive contribution to the overall objectives of the IFI Climate Change Programme and provides a template to aid with the installation of more rain water harvesting systems for buildings owned by Inland Fisheries Ireland.

By using only what we need, we can all play our part in safeguarding our water for our future generations.