



Rainwater Harvesting

for domestic properties



 **rain
retain**
Domestic Rainwater
Harvesting Solutions

Environmental Wastewater Solutions

 www.wpl.co.uk

Why do we need Rainwater Harvesting?

Climate change: our precious water reserves are declining



Up to 50% of mains water in the home can be saved



Adds sustainable value to your property



Erratic weather: the UK is prone to flooding and droughts



Saves you money by reducing your metered water usage



By 2016, all new homes will have to achieve a level 6 star rating under the Code for Sustainable Homes. So if you're building a new property, be prepared with RainRetain!

Codes of Practice & Building Regulations

What is the Code for Sustainable Homes?

It is a single, national standard for sustainable homes. The code uses a sustainability rating system to communicate the overall sustainability performance of a home. One star is the entry level, and six stars is the highest performance level within the code.

How do rainwater harvesting systems contribute?

There are nine categories which make up the code, two of which concern water:

Category 2 - Water (WAT 1 & WAT 2)

In this category, the code states the water consumption per person, per day and has mandatory requirements with time scales at each level as follows for [Internal Use \(Wat 1\)](#):

Water consumption	Credits	Mandatory Levels
≤ 120 litres/person/day	1	Levels 1 and 2
≤ 110 litres/person/day	2	
≤ 105 litres/person/day	3	Levels 3 and 4
≤ 90 litres/person/day	4	
≤ 80 litres/person/day	5	Levels 5 and 6
Default Cases None		

Date	Public Sector	Private Sector
2008	Code level 3 stars	Assessment mandatory
2010	Code level 4 stars	Code level 3 stars
2013	Code level 6 stars	Code level 4 stars
2016		Code level 6 stars

A rainwater harvesting system can reduce the water consumption to 80 litres per person per day. The [RainRetain Premium Garden system](#) also contributes under the [External Use \(Wat 2\)](#) category.

Category 4 - Surface Water Run-Off (SUR1)

RainRetain rainwater harvesting systems can contribute to the management of surface water run-off from developments and enhance any Sustainable Urban Drainage System (SUDS) design.

Which part of Building Regulations is concerned with water efficiency?

Building Regulations Part G2

Part G comprises six sections and section G2 covers water efficiency, which states that all new-build homes now need to meet a water efficiency standard.

Which British Standard involves rainwater harvesting systems?

The British Standard is [BS8515:2009](#)

All WPL rainwater harvesting systems are designed in accordance with this standard. We offer a wide range of high quality rainwater harvesting systems to suit any application, with the added benefit of being fully compliant.

RainRetain Premium Domestic Systems



RainRetain Premium Domestic systems are designed to the highest possible standards and use high quality tanks, pumps and filters.



- **Turret** - on the neck, can rotate to allow the tank to be installed at any angle
- **Telescopic lid** - can be tilted to suit ground level for low visual impact
- **Tanks** - made of Duralen, a recyclable material, are tough, stable and lightweight

Two complete systems available:

Home and Garden
+ a High Water Table range

- Easy to install
- Small excavation area
- Does not need concrete back fill

HOME SYSTEM Direct Feed

- Uses cutting edge pump and filter technology
- Switches between mains and rainwater as required
- High water yield of over 95%
- Filter can be removed easily for maintenance

Uses:

Toilet flushing | laundry | garden irrigation | car washing | general cleaning

GARDEN SYSTEM

- Uses simple filters
- Supplies rainwater by a pressure sensitive pump
- Gives a water yield of 100%
- Low energy consumption

Uses:

Garden irrigation | car washing | general cleaning

High Water Table (HWT) System

If you are building in an area with a High Water Table, you will need our HWT tank:



- Available on both Home and Garden packages
- 4 tank sizes: 1500, 3000, 5000 and 7500 litres
- Can be installed in groundwater or on rocky ground
- Optional vehicle loading dome shaft for use under driveways
- Telescopic lid can be tilted to suit ground level for low visual impact



HOME SYSTEM Direct Feed

n55Plus

The Home system uses cutting edge pump technology, to run alongside the mains water supply to the property, switching automatically between stored rainwater and mains water, as required. Using rainwater within your household can help to reduce your water bills.



Home system includes:



Dry, wall mounted **pump** control unit with automatic mains switch

(Unit prevents cross contamination of mains and rain-water. Guidance taken from Water Supply Regulations 1999 and the Water Bylaws 2000, Scotland)



WPL
Guarantee
TANK 15yr
PUMP 2yr



Equal wall thickness throughout the **tank** makes it **stable, strong** and **reliable**

It is made out of Duralen, a **recyclable** material

Lightweight tank can be supplied in two halves for **easy installation**

Save up
to 50%
of mains
water

System also includes (not shown):

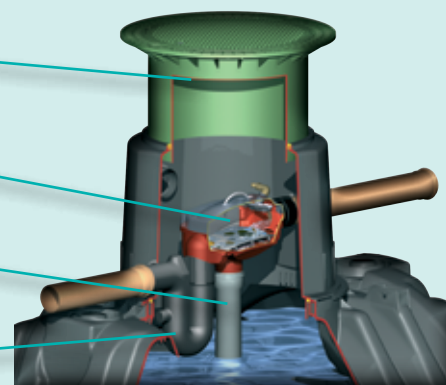
- wall duct DN100
- floating water extraction unit
- PE suction pipe 12m - black and green

mini **telescopic dome shaft** with PE lid, for pedestrian loading

self-cleaning internal **filter**

inflow **stilling system**

overflow **siphon**



Optional Items for Home and Garden Systems



Vehicle loading telescopic dome shaft with cast iron lid for installations under drives



Pedestrian loading maxi telescopic dome shaft with PE lid, for tanks needing deeper installation



300mm Extension collar for even deeper inverts (not available on HWT Systems)

GARDEN SYSTEM

Using rainwater is the most natural way to keep your garden looking beautiful all year round. Without a rainwater harvesting system, you will use expensive drinking water to maintain your garden.

Garden system includes:



Lift out **filter** insert for easy cleaning



Submersible or dry mounted suction **pump**



NEW! Easy hose connection in tank lid, with lift up flap

System also includes (not shown):

- floating water extraction unit
- water hose extraction unit
- pressure hose 10m



SAVE
expensive
drinking
water



Equal wall thickness throughout the **tank** makes it **stable, strong** and **reliable**

It is made out of Duralen, a **recyclable** material

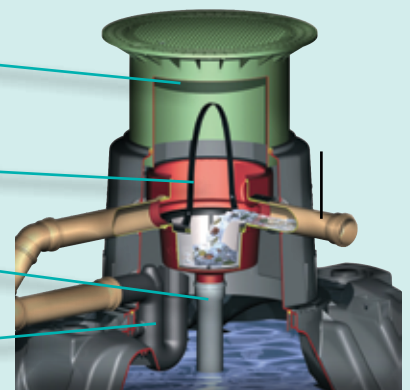
Lightweight tank can be supplied in two halves for **easy installation**

mini **telescopic dome shaft** with PE lid, for pedestrian loading

internal **filter**

inflow **stilling system**

overflow **siphon**



RainRetain Premium Home Booster Pump
Additional submersible suction **pump** kit for home system tanks installed further than 8m from the main pump

Technical details and dimensions
Please see p8 for technical details and dimensions for both the Home and Garden systems

n55Plus

registered
LABC

Percolation Tunnels

Designed to work in conjunction with the RainRetain domestic rainwater harvesting systems, these multi-purpose tunnels act as a soakaway, or surface water run-off, to replace conventional drainage systems. The system is made up of one, or several, tunnel modules and two end plates, so it can be sized exactly to meet the required volume.

- 300 litres of water storage per unit
- 3 dimensional percolation
- Made from 100% recycled polypropylene
- Lightweight construction
- Easy to handle
- Stackable (up to 40 tunnels per palette)
- Minimal footprint reduces ground excavation
- Fast and easy installation - no need for heavy equipment
- Flexible - combine multiple modules to achieve required volume
- Can be used for attenuation or soakaway applications

Space saving and cost efficient!

Suitable for **installation** under pedestrian or vehicle loading areas



Percolation tunnel **installed under lawn** (min 250mm earth covering without traffic load)



Percolation tunnel **installed under hard standing** (min 500mm earth covering with traffic load)



WPL
2yr product
Guarantee

Percolation tunnels contribute to **Sustainable Urban Drainage Systems (SUDS)** by helping to return runoff to the natural environment at, or near, its source.



Cut-away section of percolation tunnel showing the inflow and 3D percolation of storm water

Technical Information:

Volume	300 litre
Length	1,160mm
Length (inc end plates)	1,220mm
Width x Height	800mm x 510mm
End connections	100, 150, 200, 300mm
Top connections	100, 200mm
Weight	Approx 11kg
Material	100% recycled polypropylene
Installation depth pedestrian	Min 250mm below lawn/ground level plus height of tunnel(s)
Installation depth under vehicle loading (up to 3.5 tons/sqm)	Min 500mm below hard standing/drive plus height of tunnel(s)

Technical Details and Dimensions

RainRetain Premium Domestic Home and Garden systems

Tank Capacity	2,700 litre	3,750 litre	4,800 litre	6,500 litre	7,500 litre*	9,600 litre*	13,000 litre*
Length	2,080mm	2,280mm	2,280mm	2,390mm	*system comprises two underground tanks of equal size		
Width	1,565mm	1,755mm	1,985mm	2,190mm			
Height (including tank dome)	2,010mm	2,200mm	2,430mm	2,710mm	*dimensions are for 2 x 3,750 litre tanks	*dimensions are for 2 x 4,800 litre tanks	*dimensions are for 2 x 6,500 litre tanks
Height of tank dome	610mm	610mm	610mm	610mm			
Internal ø of tank dome	800mm	800mm	800mm	800mm			
Inlet depth	300mm	300mm	300mm	300mm			
Weight	120kg	150kg	185kg	220kg			
Groundwater	<ul style="list-style-type: none"> Groundwater stable up to the middle of the tank** **If the ground water is above this please see details of our High Water Table System Required earth covering of 800mm 						

RainRetain High Water Table Domestic Home and Garden systems

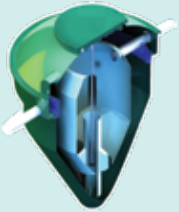
Tank capacity	1,500 litre	3,000 litre	5,000 litre	7,500 litre
Length	2100mm	2450mm	2890mm	3600mm
Width	1250mm	2100mm	2300mm	2250mm
Height of tank shoulder	700mm	735mm	950mm	1250mm
Height of dome collar	315mm	315mm	315mm	315mm
ø inlet	650mm	650mm	650mm	650mm
ø tank dome	800mm	800mm	800mm	800mm
Weight	80kg	170kg	240kg	360kg
Groundwater - max immersion depth	700mm	735mm	950mm	1250mm

RainRetain, Premium and HWT, Domestic Home and Garden systems

Pedestrian Loading Telescopic dome shaft with PP lid	Mini pedestrian loading (supplied as standard) <ul style="list-style-type: none"> Including PP cover with childproof lock The tank is flush with the ground For use with Home or Garden systems Depth adjustable from 750mm–950mm earth covering above the tank Can be tilted by 5° Colour: Grass green Length: 360mm Ø inner: 600mm • Ø outer: 778mm Weight 6kg • Height: 350mm 	Maxi pedestrian loading (optional extra) <ul style="list-style-type: none"> Including PP cover with childproof lock The tank is flush with the ground For use with Home or Garden systems Depth adjustable from 750mm–1,050mm (Home & Garden)/950mm (HWT) earth covering above tank Can be tilted by 5° Colour: Grass green Length: 476mm Ø inner: 600mm • Ø outer: 850mm Weight 13kg • Height: 450mm
Vehicle Loading Telescopic dome shaft with cast iron lid	Vehicle loading (optional extra) (HWT - Vehicle loading tank must be specified) <ul style="list-style-type: none"> Class B cast iron cover For use with Home or Garden systems The tank is flush with the ground Infinitely variable from 750mm–1,050mm earth covering over the tank Length: 476mm Ø inner: 600mm • Ø outer: 850mm 	
Garden System	Filter <ul style="list-style-type: none"> Filter integrated into the tank 100% water yield Inflow stilling system for controlling the water inflow Overflow siphon and rodent guard Spannfix pipe connection sleeve 	Pump <ul style="list-style-type: none"> Submerged suction pump Floating water extraction unit Water hose connection box 10m pressure hose
Home System	Filter <ul style="list-style-type: none"> Self cleaning filter integrated into the tank 95% water yield Inflow stilling system for controlling the water inflow Overflow siphon with rodent guard function Spannfix pipe connection sleeve Tank and filter overflow are connected to the sewer network with this filter package 	Pump <ul style="list-style-type: none"> Wall mounted within the property Quiet running Integrated dry running protection Water supply control unit Floating water extraction unit DN 100 wall duct 12m suction pipe - black and green Dimensions 600 x 600 x 200mm

Other WPL Products

Wastewater Treatment



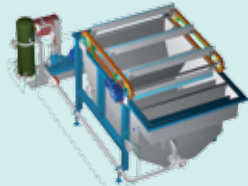
Diamond



HiPAF



Hire Fleet



Industrial Effluent Treatment

Rainwater Harvesting



RainRetain Developers



RainRetain Domestic



RainBrain



RainSustain Commercial

Other Products & Services



Grease Guzzler



Maintenance Contracts

Availability

We hold extensive stock for our full range of products and offer a rapid logistics service.

Installation and Maintenance

All our products are supplied with comprehensive installation manuals, including maintenance advice. Further advice is available by calling (023) 9224 2600.



Call: **+44 (0)845 450 4818**
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Where to buy WPL products

About WPL Limited

WPL Limited provides innovative and reliable wastewater treatment, rainwater harvesting and grease management systems for domestic, commercial and industrial markets as well as holding a prominent position as a supplier to the water companies. As an internationally recognised leader in the design, manufacture and supply of both standardised, and bespoke environmental solutions, WPL Limited is dedicated to ensure the provision of high quality products and services.

Environmental Policy

WPL Limited is ISO14001 accredited. WPL Limited rigorously fulfils its vision of protecting the environment by delivering reliable wastewater solutions. A strong focus on quality and compliance ensures that all wastewater treatment systems are designed to work within the guidelines of the British Water Code of Practice and exceed all present and proposed discharge consent standards enforced by the Environment Agency, SEPA and other regulatory authorities.



INVESTOR IN PEOPLE



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