Dŵr Cymru
Welsh Water

Water efficiency self-assessment

— for small businesses

dwrcymru.com

It is easy to take water for granted, especially when your focus is on doing what you do best – keeping your business running. That is why, as a water company, we want to help you realise just how precious this resource is and understand how you and your business can help to conserve it.

Whatever the size of your business, water is potentially crucial to your day-to-day operations. Water is important to even the smallest of businesses – from making tea to flushing toilets. Did you know, for example, that you use on average nine litres of water every time you flush a toilet?

We have created this guide to provide you with a few easy steps that you can take to CUT the amount of water you use and potentially reduce the volume of waste in your business. Also, by using less water, your business could save money on both water supply and wastewater disposal.

CONTENTS

THE CUT METHOD

This water efficiency self-assessment guide will help you understand your water usage and advise you on practical actions that can reduce the amount of water you use.

Before being able to identify where and how water can be saved, it is necessary to understand where, how and why water is used in your business.

In order to do this, we recommend the CUT method, which stands for:

– **Check**
– **Understand**
– **Take action**

Here are some facts and figures to get you started on your journey to saving water:

Typical usage for fittings and appliances

– Toilets: 6-13 litres per flush (typically)
– Sinks: 6-9 litres per bowl
– Showers: 30-90 litres per shower
– Dishwasher: 20-40 litres per load
– Laundry: 60-100 litres per load
– Garden hose: 8-30 litres per minute (500-1800 litres per hour)

Worst culprits for water wastage and leakage

– Constantly running or dripping taps
– Faulty ball valves/overflowing cisterns
– Constantly flushing urinals
– Leakage on pipework

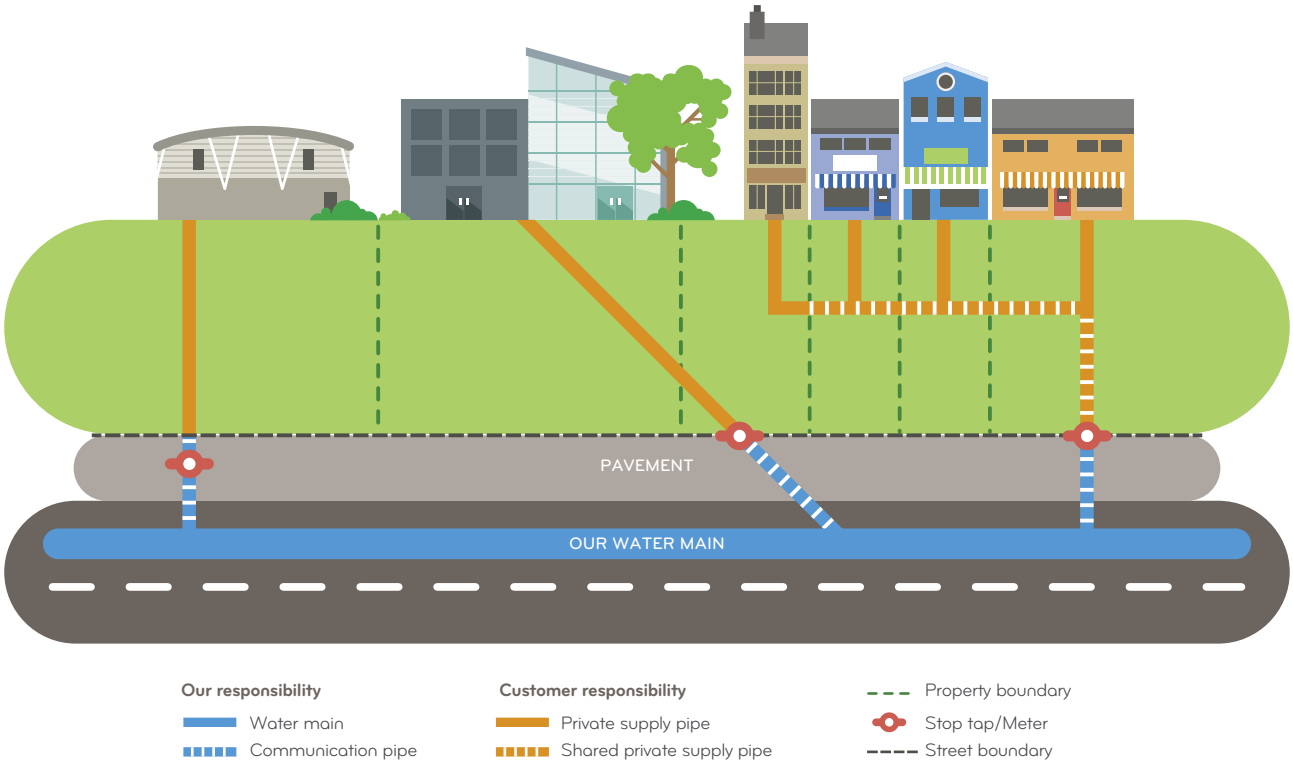
Wastage volumes for a leaking tap

– One drip per second wastes 4 litres per day
– Drips breaking into a stream waste 90 litres per day
– 3mm stream wastes 985 litres per day
– 6mm stream wastes 3,500 litres per day

CHECK

Step 1 – Identify Any Leakage

Identifying and fixing any leakage is arguably the most important factor of water efficiency, because as a business owner you will pay for the water (and possibly wastewater disposal) but get zero benefit from it. If you have leakage on your private water network (illustrated below), eliminating this could produce the greatest results for water efficiency.



More information on water network responsibility – who owns what – can be found in our '**Code of practice for Leakage - Non Household Customers**'.

A) Complete a visual check of all safely accessible water fittings (taps, showers, toilets, urinals etc.).

Walk around your business premises to identify all safely accessible water fittings and check whether any of these fittings are leaking, dripping or constantly running. Make a note of your findings in the 'Location' and 'Dripping' (yes/no) columns of the Fixtures & Fittings Log below.

Toilet Leak Detection Tablets can help to show you if you have any internal leaks in your toilet (available via the Product Portal – Save Water Save Money: **https://savewatersavemoney.co.uk/products/toilets**).

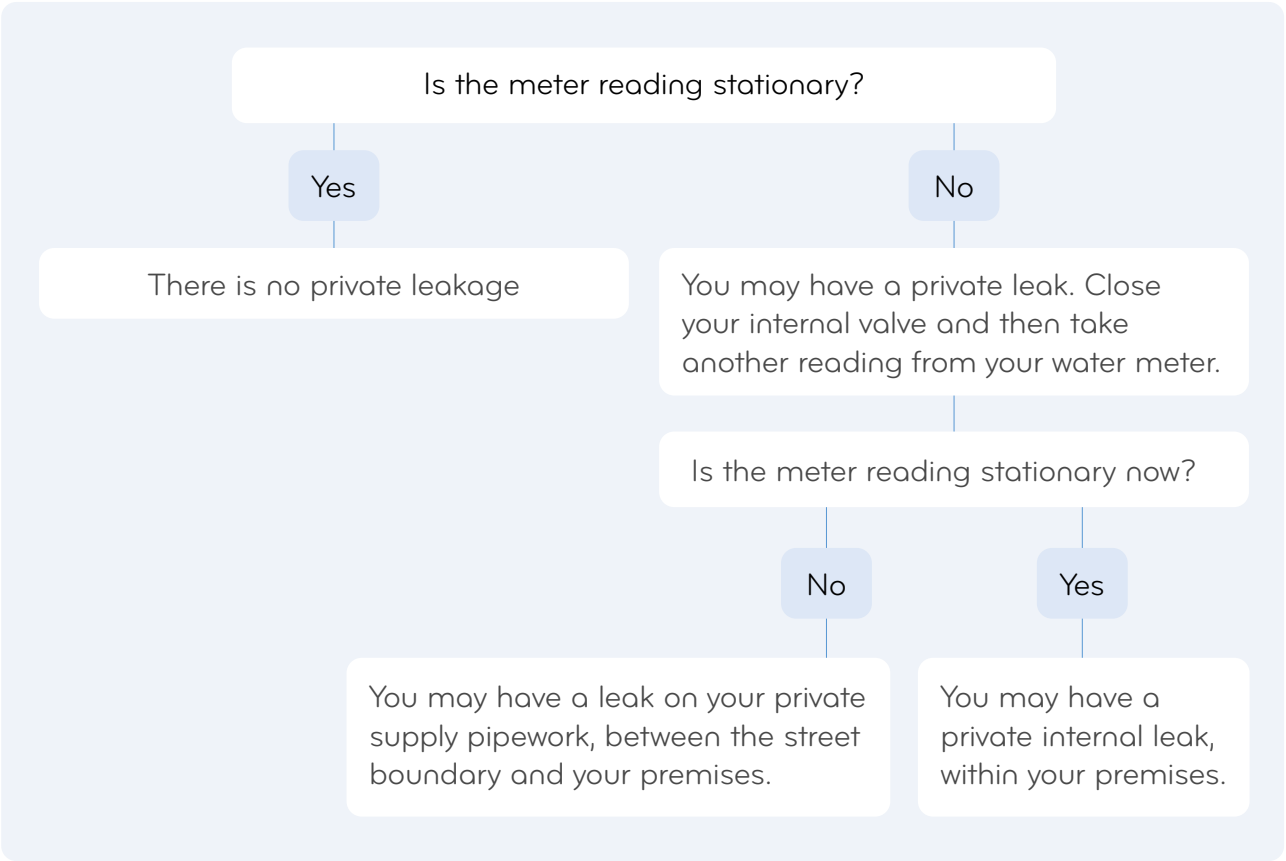
Fixtures & Fittings Log

	Step 1A			Step 2A		
Taps	**Location & Type**	**Dripping**		**Low**	**Medium**	**High**
		yes	no	<9 litres/ minute	9-14 litres/ minute	>14 litres/ minute and/ or continually leaking
1						
2						
3						
4						
5						
6						
7						
8						
Showers	**Location**	**Dripping**		**Low**	**Medium**	**High**
		yes	no	<10 litres/ minute	10-20 litres/ minute	>20 litres/ minute
1						
2						
3						
Toilets	**Location**	**Dripping**		**Low**	**Medium**	**High**
		yes	no	Cistern < 6 litres	Cistern 6-9 litres	Cistern > 9 litres
1						
2						
3						
4						
Urinals	**Location**	**Dripping**		**Flush operation**		
		yes	no			
1						
2						

B) Use your water meter to check for private leaks (if it is safe to do so).

It is also worth checking to ensure there are no leaks on non-visible pipework.

Ensure that no water is being used and that your internal valve is open and then take a reading from your water meter.



Remember, fixing private leaks is your responsibility. If needed you can contact a local, approved plumber for assistance at WaterSafe. www.watersafe.org.uk

If you do not already know where your water meter is located, then please contact us on **0800 052 0140**.

To confirm you are looking at the correct water meter, your meter serial number can be found on your water bill.

For more information, you can find a guide to 'Your water meter' **here**.

Step 2 – Get to know your water usage

A) Gather data on your fittings

Follow the guidance below to measure the current flow/volume of all the water fittings you identified in the Fixtures & Fittings Log on page 5. Make a note of your findings in the appropriate 'Low', 'Medium' or 'High' column in the Fixtures & Fittings Log.

Taps
For this step you will need a large (1 to 2 litre capacity) measuring container and a stopwatch. The tap should be fully open, at the temperature most typically used if it is a 'mixer tap'. Measure the amount of water (in litres) in the container after 6 seconds. Multiply that amount by 10 to calculate the current flow rate (in litres per minute). For example, 0.8 litres x 10 = 8 litres per minute.

Showers
For this step you will need a large (1 to 2 litre capacity) measuring container and a stopwatch. With the shower-head fully open, measure the amount of water (in litres) in the container after 6 seconds. Multiply that amount by 10 to calculate the current flow rate (in litres per minute). For example, 1.1 litres x 10 = 11 litres per minute.

Toilet cisterns
For this step you will only need a tape measure. For a reasonable approximation of toilet flush volumes measure the internal dimensions of the cistern. If the cistern is approximately rectangular then measure its width and breadth (in cm). Then measure from the top of the water level inside to the cistern down to the lowest level reached when the flush is operated (in cm). Multiply the three measurements, then divide by 1,000 to calculate the current flush volume (in litres). For example, 30cm width x 15cm breadth x 30cm depth = 13,500cm^3 / 1,000 = 13.5 litres.

Urinals
Monitor and understand the frequency with which urinals are typically used and flushed.

B) Gather data from your meter

Read the meter (only if safe to do so) twice daily at the same time over the period of a week – you can use the daily Meter Reading Record below. There needs to be a reading taken at the start of the working day and at the end of the working day to record all usage during this time. Note any activities that use large volumes of water during this period (e.g. using hosepipes or filling tanks) and record the day and time that they occur.

For more information you can find a guide on 'How to read your water meter' **here**.

Meter Reading Record

		Meter Reading (m^3)	Water Used	Activities using large volumes of water
Monday	Morning			
	Evening			
Tuesday	Morning			
	Evening			
Wednesday	Morning			
	Evening			
Thursday	Morning			
	Evening			
Friday	Morning			
	Evening			
Saturday	Morning			
	Evening			
Sunday	Morning			
	Evening			

Only attempt to take meter readings if it is safe to do so.

Costs of water used and associated sewerage charges can be found in our Scheme of Charges at **dwrcymru.com**

UNDERSTAND

Step 3 – Analyse the results

A) Data from reviewing your fittings

Checking that you have recorded current flow rates and cistern sizes in the correct column (using the below guide), your completed Fixtures & Fittings Log on page 5 will highlight any inefficiencies with existing fixtures and fittings.

 TAPS	**High**	>14 litres/minute and/or tap is leaking continually
	Medium	9-14 litres/minute
	Low	< 9 litres/minute
 TOILETS	**High**	>9 litres
	Medium	6-9 litres
	Low	<6 litres
 SHOWERS	**High**	>20 litres/minute
	Medium	10-20 litres/minute
	Low	<10 litres/minute
 URINALS	It is most important to monitor and understand the flush frequencies of any urinals, as well as how often they are typically used. Think whether the frequency of flushing seem insufficient, appropriate, or excessive.	

B) Data from your water meter

Look at your completed Meter Reading Record on page 8. Look at the times when the building is unoccupied e.g. overnight. Is there any water being used? If so, this could be due to continually flushing cisterns or possibly a leak.

Look at the daily trends. Are there any differences in the amount of water being used on different days? If so, try to identify where the water is being used and if this is necessary.

Look at the amount of water being used for large volume activities and assess if this appears to be a reasonable amount.

TAKE ACTION

Step 4 – Develop an action plan

A) Repair any leaks on private pipework

Contact a local, approved plumber at WaterSafe to fix any leak(s) identified on private pipework. **www.watersafe.org.uk**

B) Repair or replace any 'dripping' fittings

If any taps are dripping, plan to replace the tap's washer as soon as possible. If any shower heads are dripping, plan to replace them as soon as possible (see step 4C).

For any urinals or cisterns that are constantly flushing/running, plan to get them repaired.

You can find your local, approved plumbers to help with water fittings repairs at WaterSafe: **www.watersafe.org.uk**

C) Install water efficient devices

Think about installing water efficient devices on the fittings identified as medium and/or high water users in your Fixtures & Fittings Log (page 5):

Taps
You can add tap aerators or replace with spray-taps to help reduce the flow. Also, if staff or customers regularly leave taps running, push taps or self-closing taps may be a beneficial investment for your business. If you already have push taps or self-closing taps then it's important to ensure they only run for as long as needed.

Toilet cisterns
'Save A Flush' Bags are a very simple addition to reduce a cistern's water consumption by 1.2 litres with every flush. Dual flush devices may alternatively be a worthwhile investment.

Urinals
If your urinals operate on a timer, flushing every set period regardless of the urinals' use, consider whether your business may benefit from installing sensor-activated Urinal Flush Controllers. This may reduce your consumption by ensuring the urinals only flush when required.

Showers
Replacing existing shower heads with more efficient options can reduce flow. Additionally, it is worth considering:

Hosepipes
Trigger outlets, replacement with a pressure washer, or could buckets be used for certain activities.

Several high quality water efficiency products are available via the Product Portal – Save Water Save Money: **https://savewatersavemoney.co.uk/products/taps**.

D) Review your Meter Reading Record

If your completed Meter Reading Record (page 8) showed any overnight usage, then take new readings after completing steps 4A – 4C, to confirm that unexpected usage has stopped.

If your completed Meter Reading Record (page 8) showed any unexpected daily trends, then take new readings after completing steps 4A – 4C, to confirm the changes have reduced/stopped.

E) Raise staff and customer awareness

Raise staff awareness by letting them know how you're trying to reduce the business's water consumption, discuss how they can help (e.g. not leaving taps/hoses running) and encourage them to report leaks. We have posters you can print and display at your premises to promote water efficiency to your staff and/or customers **here**.

F) Record and compare your own meter readings

Recording meter readings on a regular basis (daily, weekly, or monthly) will allow you to continue identifying trends in water consumption which you can investigate, and address as needed. Diarise dates to take meter readings. You can record water consumption, similar to page 8, in a spreadsheet which will let you generate graphs which make it much easier to view the data.

If you would like to explore automated consumption logging via our data logging service, also known as telemetry*, please contact the Business Services Team on **0800 260 5052** or by emailing **bst@dwrcymru.com**.

You can find out more about data logging here:
https://business.dwrcymru.com/business-services/data-logging

*Value adding products and services such as data logging are chargeable services

G) Compare bills

Remember to always compare new bills to previous bills to check for unexpected changes in usage.

Summary

Whatever the size of your business, you can do a lot yourself with just a few small changes at little or no cost. With the steps contained in this guide, saving water is easier than you might think.

Making a few simple changes to your business will help you to save water, save money and reduce your carbon footprint. Better for you, better for the environment.

WHAT WE DO

Our Business Services Team is here to offer our business customers a free account management service – acting as a single point of contact for any billing, operational or general enquiries you may have.

We're also here to help your business be as efficient as possible. Through our range of value-added products and services we can help you lower your water usage and reduce costs.

Get in touch to see how our services could benefit your business

0800 260 5052

business.dwrcymru.com

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