

School water audit

Caretaker's guide



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Introduction

Schools can benefit greatly by performing water audits, so we've put together this guide to help save your school water and money.

Water is our most valuable resource and because it's so precious, it's important that we all do our bit to save water. Every drop really does count! You can help save water by making small changes to the way you use it and by spotting sneaky leaks.

In this guide you will:

- Learn how to read a water meter and understand your school's daily and weekly water usage
- Explore school grounds to detect leaks, make a record of them and what to do to fix them
- Create an action plan for your school to keep saving water and money

1. Take a meter reading

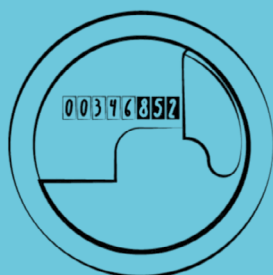
Reading your water meter is a great way to help monitor your school's water use and to check for sneaky leaks. The water coming into your school flows through the water meter, which is fitted to a water pipe.

Once you find your school's water meter, you will be able to see numbers on a dial which turn slowly to give a reading. If you can see the dials moving, then it means water is being used somewhere in your school.

To read the meter you will need to look at the first digits – if your school has an older style meter, there will be a dial whereas newer meters have digital displays.

Meters measure water in meters cubed (m^3). $1m^3 = 1,000$ litres, so to convert your reading into litres x by 1,000.

ANALOGUE METER



DIGITAL METER



> **STEP 1:** Record the numbers shown on your school water meter before school in the morning and again after school in the afternoon/evening to find your daily water use result. You'll need to subtract the first meter read from your second meter read to find your daily usage.

> **STEP 2:** Repeat steps throughout the school week.

To assess if your school uses water over the weekend, take a meter read at the end of the week (Friday afternoon/evening) and then again first thing on Monday morning.

> **STEP 3:** Total daily results to find out how much water has been used over the weekend.

You can use your school water meter to help you detect any hidden leaks. Make sure you perform this check over the weekend when your school is closed.

> **STEP 1:** Turn off all your water using appliances on Friday afternoon/evening. This includes appliances such as dishwashers and washing machines

> **STEP 2:** Wait 30 minutes to allow any tanks or cisterns to fill up and then take a meter reading (including the red digits) and make a note of this as you'll need to check whether the reading goes up later.

> **STEP 3:** Take another meter reading first thing on Monday morning before turning all of your water using appliances back on.

> **STEP 4:** Was the second reading higher than the first?

YES – The result from the test indicates that you may have a leak on the premises. You should now check around your premises for leaks.

The most common leaks are dripping taps or leaky loos, but your water pipes could be leaking too. Often the water pipes within the property are beneath the floor or above the ceiling joists, leaks occurring upstairs will often leave a 'stain' on the ceiling below to help identify its location, leaks under the ground floor are usually harder to spot and may require accessing a floor trap if your property has one.

NO – You don't have a leak.




2. Perform a water audit

Now that you have recorded your water meter readings it's time to begin locating and recording any leaks around your school. Make sure you think about any potential health and safety risks before you start.

- Look out for dripping taps
- Check for silent leaks in sinks and toilets
- Check if urinals are flushing continuously regardless of use
- Survey your school for damp patches, drips or leaks

School toilets:

Leaky loos across the North West are leaking between 200 and 400 litres of clean water everyday. If you have multiple leaking toilets this could be much more.

-  **LOOK** into the bowl for any signs of trickling, rippling or flowing water between flushes.
-  **LISTEN** for the sound of water as it trickles into the bowl or a faint hissing sound as the cistern is constantly refilling.
-  **TEST** Another way to check for leaks is to wait half an hour after the last flush, dry the back of the toilet bowl before placing a piece of dry toilet paper on it. You'll soon see the toilet paper get wet if water is trickling down into the toilet from the cistern. If you spot this is happening, you've probably got a leaky loo.

Dripping/leaking taps:

- Check all taps in your school to make sure they are all turned off.
- Leave a jug under taps you suspect are leaking, when you return measure the amount of water that has been collected to see how much water is being wasted.

External leak test:

- Turn off the internal stop tap.
- Find your meter and take a reading – make a note of the dial numbers.
- Wait 30 minutes and take a second reading. Is there any change or movement between the two readings?
YES – you may have an external leak
NO – you don't have an external leak



3. Repair or replace any leaking fittings

If you find a leak on your premises, it's your responsibility to get this repaired and you may need to ask a plumber to do this. If you don't already have one, you can find an approved plumber in your area at watersafe.org.uk

As you're paying for all the water you use, finding and fixing leaks will reduce your bill and save money.



4. Check water fittings are efficient

Find a jug or container that will fit under your taps and showers (if you have any at your school). Turn the tap or shower on and measure the amount of water (in litres) in the jug or 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.

Efficient usage for different fittings

- Taps: 4-8 litres per minute
- Showers: 8-10 litres per minute
- Toilets: 4-6 litres per flush

Check if urinals are uncontrolled/flushing continuously throughout the day regardless of use. A controlled flush will have a small box connected to the side of the pipework.



5. Install water efficient devices

If your tap is flowing more than 8 litres per minute, consider adjusting the flow rate at the isolation valve. Or you can install a tap aerator, which simply screws into your tap, they work by mixing air with water, reducing the amount of water flowing through without affecting the water pressure. Tap aerators can save as much as half of the water used from your taps. Ensure push button taps are lubricated and not running for longer than required or getting stuck.

If your school has showers that are flowing for more than 10 litres per minute, consider adjusting the flow rate at the isolation valve. Or you can install an aerated shower head. A water efficient showerhead works by mixing air with water, reducing the amount of water flowing through without affecting your water pressure or shower experience.

If your toilet is using more than 6 litres per flush, consider inserting a water displacement bag/save a flush bag in the cistern.

If your urinals are flushing continuously throughout the day regardless of use, consider installing a PIR sensor/cisterniser. This will ensure urinals only flush after use/when required. If you already have a PIR sensor, ensure batteries are checked frequently and replaced when required.



6. Water saving action plan

Now you have taken meter readings, identified leaks around your school and checked your water fittings are efficient, it's time to create an action plan, so your school can carry on saving water and money. Here are some of our top tips for saving water at school:

- Carry out regular water checks to identify leaks and areas that water is being wasted.
- Put up water saving reminder posters and stickers around your school.



- Save water in the garden by installing a water butt, or planting drought resistant plants that don't need to be watered as often.
- Install water saving devices or opt for water efficient devices when your fittings and fixtures break/need to be replaced.



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