



# Welcome to the Trade Effluent Tool Kit 2 – Charges in Scotland

The water experts

## Toolkit 1: Basics

Blast the basics, such as what trade effluent is, how consents work and how to apply. Dig deep and get stuck in.

## Toolkit 2: Charges

Boost your knowledge on how trade effluent charges work and how to read and understand your bill in record time.

**Time to master your charges!**



# Introduction to Trade Effluent Charges

We're on a mission to help you get to grips with your charges – understanding how your trade effluent bill is calculated and why it's essential to identify what savings can be made and where.

The reality is that many businesses just don't fully understand how their trade effluent consent and the volume and strength of their discharge affects how much they pay. That's why we have developed this handy guide to help you understand how it all works and give you some practical tips to help you manage and reduce your effluent charges.

## Let's get stuck in!



# Step 1: How is my effluent bill calculated?

**First, let's look at how your charges are calculated.  
Once you crack the formula the rest is easy.**

Trade effluent has a charge all of its own. You'll be charged separately for your water, waste water and trade effluent.

Trade effluent is any liquid waste, other than surface water and waste water (domestic sewage) that's discharged from premises being used for a business, trade or industry and is charged at the trade effluent rate, and not the standard rate for waste water.

**Trade effluent charges are based on a split Mogden type formula.**

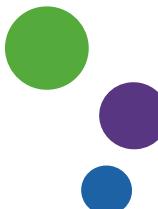
Simply, the formula is made up of two components:

1. The availability charge calculated at a rate per calendar day – these are your fixed charges
2. The operating charge calculated at a rate per cubic metre ( $m^3$ ) –these are your variable charges

The formula uses the below data to calculate how much it will cost to collect, control, deliver to and treat your effluent in the waste water treatment works and therefore determine the size of your bill:

- The maximum volume of effluent that you are consented to discharge per day (Availability Charge)
- The actual volume of effluent that you discharge to the public sewer (Operating Charge)
- The load of settled BOD and total suspended solids in the effluent that you are consented to discharge (Availability Charge)
- The actual level of settled COD and total suspended solids in the effluent that you discharge to the public sewer (Operating Charge)

Every year, Business Stream publishes a document, 'Our charges', for the forthcoming year to provide details of the charges for water, waste water and other miscellaneous services that apply from 1 April that year. A copy of 'Our charges', can be found on the Business Stream website at [business-stream.co.uk](http://business-stream.co.uk).



## The availability charge

This is the one that trips people up the most. Basically, the availability charge is a set of fixed charges based on the maximum volume, strength and solids content of your effluent as specified in your consent.

When you apply for a consent, Scottish Water will review the volume and strength of your effluent and reserve the capacity in their sewers and treatment works to remove, treat and dispose of your effluent as agreed in your consent and so you'll be charged on that basis.

This is charged on a daily basis from the:

**(CDV) Chargeable Daily Volume**

The maximum volume of effluent that you are consented to discharge over any 24 hour period

**(Ra) Reception and conveyance**

To cover the costs associated with the control and collection of your trade effluent, as specified in your consent, into their sewer and its conveyance through all their pumping stations and outfalls

**(Va) Volumetric/primary charge)**

To cover the preliminary and primary treatment of your trade effluent, as specified in your consent, which is treated and disposed of in the waste water treatment works

**(Ba) Biological capacity charge**

To cover the cost of the biological oxidation treatment of your trade effluent, as specified in your consent, including the cost of secondary disposal. These charges are set by Scottish Water, so no matter who your water supplier is they are the same!

$$365 \times [CDV \times (Ra + Va) + (Ba \times sBODI) + (Sa \times TSSI)]$$

**(sBODI) Settled Biochemical Oxygen Demand Load**

The strength of effluent (maximum settled biochemical oxygen demand load) that you're consented to discharge over any 24 hour period

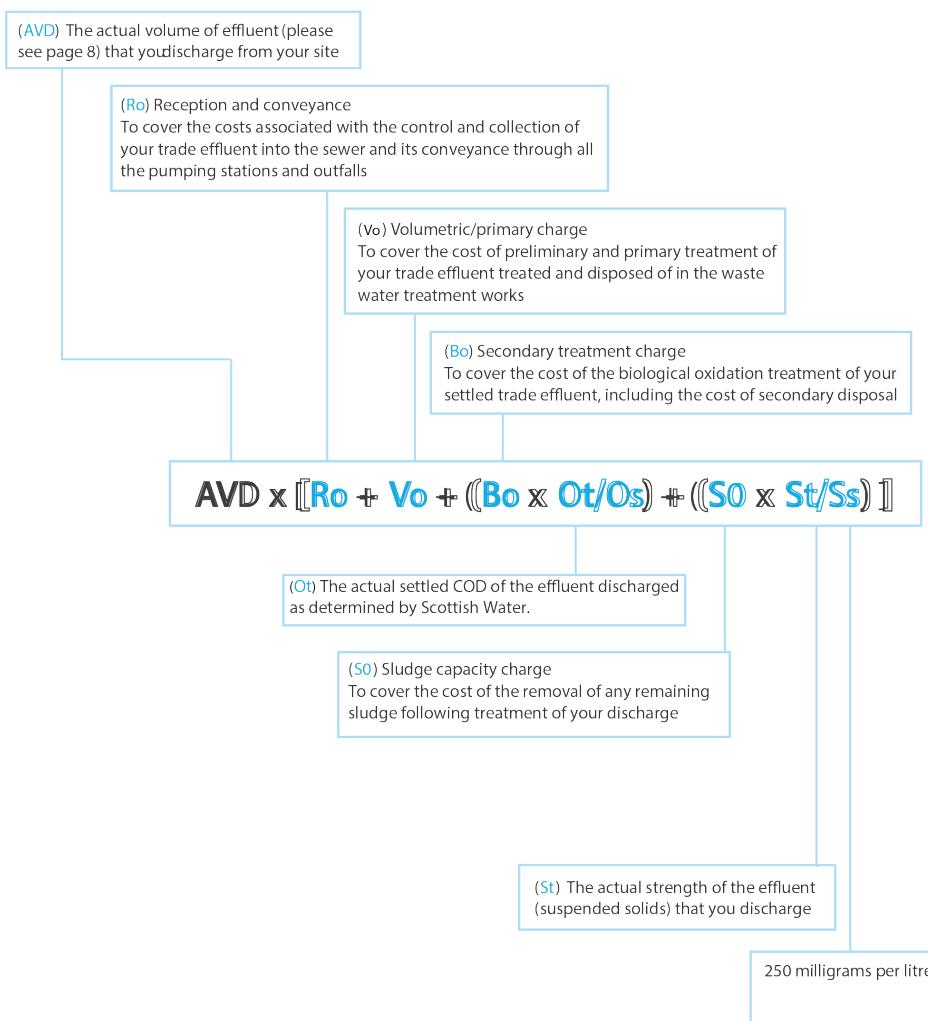
**(TSSI) Total Suspended Solids Load**

 Beware. Your availability charges will be based on the maximum volume and loads of settled BOD and total suspended solids - whether you actually do or not.

## The operating charge

The operating charge is calculated based on the actual volume, strength and composition of the effluent that you discharge from your property to the public sewer.

This is broken down by:



\*To calculate the strength of your effluent Scottish water will take grab samples of throughout the year (January to December). The analysis of these samples will be used to calculate the Ot and St (settled COD and total suspended solids) of your effluent for the following year.



# The volume of your effluent is calculated in two ways

## 1. Water Meter

For the majority of companies, the volume of trade effluent discharged is based on the volume of water entering your business - as recorded on your water meter minus any allowances:

### Domestic allowance

Where the metered water entering your site is also used for domestic purposes (such as sinks, toilets, canteens and showers), it's deducted from the volume of effluent discharged from your site and is charged as waste water on your waste water bill. Your trade effluent charges will only apply to the volume of water used in your processes. Scottish Water calculates your domestic allowance from the information that you provide on your consent application.

The typical rule of thumb for calculating domestic water use per person is:

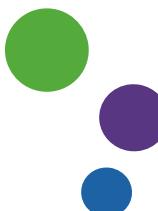
- 25 litres per day per person (Full-time equivalent person and no full food preparation canteen on-site)
- 50 litres per day per person (Full-time equivalent person and canteen on-site).

### Special allowance

Where the metered water includes water that's used but not discharged back into the public sewer i.e. water used as an ingredient or lost by evaporation. This needs to be agreed with Scottish Water and is deducted from the volume of effluent discharged as a production/process allowance

## 2. Trade effluent discharge meter

The volume of trade effluent is measured on the meter. As the meter measures the actual amount of effluent discharged allowances are rarely applicable. This would include any customers that don't have an effluent meter but have sub-meters that are dedicated to each water using activity that generates trade effluent. Remember, if any of this is double-dutch or you just need a friendly, expert ear to help you understand your charges and find money-saving solutions we have a team of trade effluent experts who can help and for free - just pick up the phone and give us a call on \$' ' %& ' &\$\$\$' or visit our website at [business-stream.co.uk/trade-effluent](http://business-stream.co.uk/trade-effluent) to get in touch.



## Step 2: Three top tips to reducing your trade effluent charges

Now that you've cracked the formula, it's the perfect time to see how much money you can save. Over the years we have helped 100's of businesses manage and reduce their trade effluent charges. Here are some of our top tips to getting it right:

### Tip 1 | Check your business is receiving the correct allowances

If you don't have an effluent meter, your operating charges are based on the consumption recorded on the water meter into your business, less a special allowance and less a domestic allowance, where applicable.

#### Is your domestic allowance for water correct?

If you've had a significant increase in staff since your original consent application you could benefit from an increase in your allowance. This will reduce the trade effluent charges but increase the non-domestic waste water charges so the customer could end up worse off.

#### Is your special non-return to sewer allowance correct?

If you've had a significant increase in production or a change in your processes since your original consent application you could benefit from an increase in your allowance. This could reduce your charges.

### Tip 2 | Super charge your sampling

It's important to gain an understanding of the strength of your trade effluent discharge and how this impacts on what you pay. The best way to do this is with a sampling survey. Different from the sampling carried out by Scottish Water, this survey takes samples over a longer period taking into consideration all of the effluent discharged both in the day and at night. This provides a greater and more accurate picture of the strength and characteristics of your effluent discharge.

Following sampling, you could find that:

#### The strength of your effluent in your consent is too high

This means that you're paying more than you need to. If this is the case we can liaise with Scottish Water on your behalf to reduce your availability charges.

This information can also be used to ensure that you can meet the regulatory requirements of your discharge consent and as back up in discussions with Scottish Water.



## Tip 3 | Take stock

It's crucial to understand where and how water is used within your business, where and how much waste water is exiting your business and, most importantly how much you're paying for it.

Remember, there are three killer points to remember:

- The water that goes in must come out and you're charged for both – and disposing of trade effluent generally costs more. Volume is key!
- A water or waste water sneaky leak can zap your profits and ruin your reputation.

Reducing how much water you use and effluent you generate makes perfect business sense. You could save up to 30%\* in water and trade effluent savings alone at little or no cost if no measures have been implemented previously. As much as 50%\* or more, might be achievable if projects with payback periods of up to two years are included. That's not to mention all the other indirect savings associated with managing your water use and reducing your effluent.

Check our handy guide to carrying out a water audit and developing an on-going money saving action plan right here.

\* Wrap 2015

