Anglian Water Wholesale Trade Effluent Charging

This guidance supports information on trade effluent charging in the Anglian Water Wholesale Operation Manual and in the Anglian Water Wholesale Charges Schedule. Both of these should be referred to for specific charges and interpretations of the Operational Terms and Market Codes.

1. General Points

Wholesale Trade Effluent Standing Charges will be applied from the date of effect of the Consent. If the discharge is already ongoing we will charge from the date the application is duly completed. Charges will stop from the date the Consent is formally directed to nil via an application.

2. Sample Strength Values Used to Raise Wholesale Charges

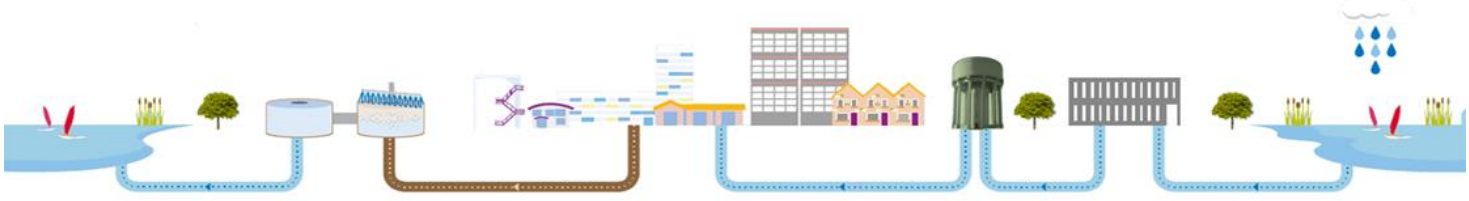
2.1 Introduction

All Anglian Water wholesale trade effluent volumetric charges are calculated using a fixed value for Chemical Oxygen Demand (COD) and Total Suspended Solids (TSS).

Samples taken to determine values are charging samples and will be marked with 'CH' code. This can be seen in the TE results which are viewable via the Retailer Portal.

The types of fixed value and how they are determined is laid out below.

2.1 Standard Regional Strengths



For certain industries there is limited regional variation in the defined trade effluent processes and therefore the quality of the discharge.
To these we apply Standard Regional Strengths (SRS) with a fixed COD and TSS value. These values are published in our Wholesale Charges Schedule .

Anglian Water categorise similar business activities into defined trade effluent types. Each type of business activity is assigned a description and number which we refer to as a 'TEC code'.

SRS are applied to Trade Effluent discharges in certain TEC codes as laid out in our Wholesale Charges Schedule. These standard strengths are calculated by taking samples at several premises across the region and are reviewed periodically.

More details of the review process can be provided upon application.

2.1.1 Creating new Standard Regional Strengths

From time to time, Anglian Water may introduce a new SRS for a TEC code. The new SRS will be derived from the range of sample data taken from each individual NHHC in that TEC code. More details of this process are available on request.

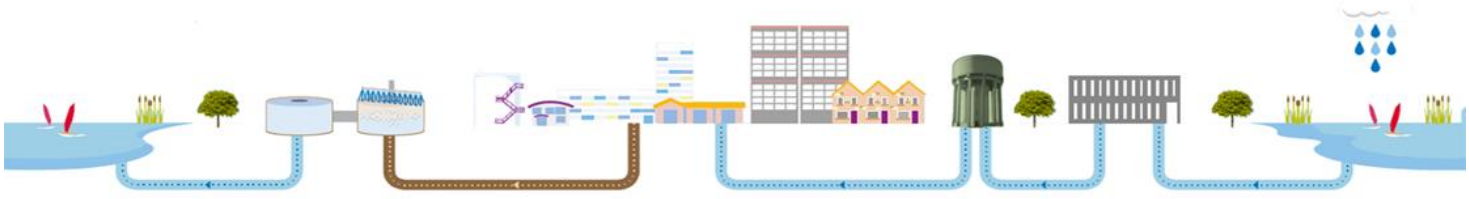
Where an existing discharge exists in that TEC code and the Retailer does not wish to have Wholesale Primary Charges raised using the new SRS, they may remain on their existing charging methodology.

However all new discharges in that TEC code will have Wholesale Charges raised using the new SRS.

2.2 Banded Charges

Consented Discharges which are less than 6 months in duration have their Wholesale Volumetric Charge based on one of three banded strengths, each with a fixed value for COD and TSS, depending on the nature of the effluent, as laid out in our Wholesale Charges Schedule.

2.3 Fixed Strengths



All other discharges are placed on a Fixed Strength (FS) for the purposes of calculating Wholesale Volumetric Charges.

This means that the COD and TSS are fixed at a particular value based on an analysis of samples taken of the discharge in previous years or samples taken prior to the Consent being issued.

The FS value is calculated as an average of the charging samples taken in the relevant period.

The frequency at which the FS figure is reviewed and the number of samples taken to determine the initial FS and then the review of this figure, is dependent on the financial value of the discharge to Anglian Water.

The financial value is determined by the size of the Wholesale bill for that discharge if it was discharged at the consented volume, COD and TSS strength.

2.3.1. Perpetual (non–reviewable) Fixed Strengths (PFS)

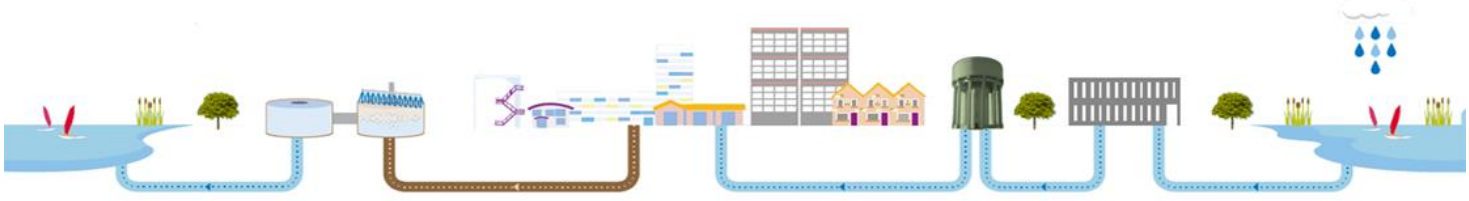
The Wholesaler does not routinely review the FS values for discharges with a low Wholesale bill, or who have a consented flow of less or equal to 5 m3/d, as it is not financially justified.

Therefore these Discharges are set with a Perpetual Fixed Strength (PFS).

2.3.2 Reviewable Fixed Strengths (RFS)

Those NHHC who do not fall under PFS will have their fixed strengths reviewed at a set time interval using samples taken throughout the review period: these are termed a Reviewable Fixed Strength (RFS).

The review period is either annually or every 3 years and the larger the Wholesale bill the more samples will be used to review the RFS. More details are available on request.



2.3.3 New Discharges

Each new Discharge that has a PFS or RFS will be assigned a fixed strength at the time the Consent is issued.

Ideally these samples should be gathered prior to the Consent being issued, however for new discharges or where limited or no sampling data is available, Anglian Water will use comparative data from similar processes until sufficient samples are available to establish a FS. If no samples are available, initially a FS of 50% of the NHHC's Consent value for COD and TSS will be used until data becomes available.

Where a process results in a material seasonal variation in strengths then Anglian Water may reassess the COD and the TSS values to set fixed strengths representing the seasons.

2.4 Retailer Challenge

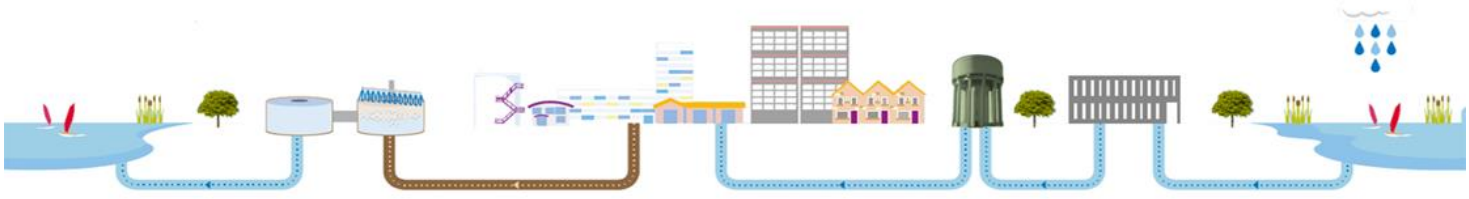
In general, if a Retailer wishes to challenge the use of results to calculate values used in charging they should do so by completing a G01 form, including full supporting reasons for the challenge.

If the challenge is on a particular sample result this challenge should be made within 20 business days of the sample result being available to the Retailer or their NHHC. Anglian Water will inform the Retailer of the decision within 20 business days after we have received a duly completed G/01.

2.4.1 Challenges to Standard Regional Strengths

If a Retailer believes that the SRS being offered is not fair and appropriate to a NHHC's discharge, they have the option of requesting to 'opt out' by providing evidence through accredited laboratory sample data that their strength is significantly different to the SRS value for their TEC code.

The sample data provided will need to be spread over a time-of-day and date range



to be representative of the full discharge profile. For example, for a vehicle wash, sample data will be required throughout the entire cycle, both before and after the emptying of interceptor. If acceptable, the NHHC will be placed on their own fixed strength value. This may be reviewable or perpetual depending on their Wholesale charge.

2.4.2 Challenges to Fixed Strength values

A Retailer may challenge the application of sample results used for calculating a FS.

For a RFS the Retailer may request that Anglian Water shortens the period over which a specific sample result is applied. When calculating the RFS for a discharge an average is calculated which apportions equal time periods to each sample. For instance if 12 samples are taken to determine a FS over a year then each sample will be considered to be of that strength for $1/12^{th}$ of the year. The Wholesaler may weight the average such that a high result is applied for a shorter time period if we consider this appropriate based on evidence supplied by a Retailer, to a minimum of one day. Appropriate supporting evidence for inclusion on the G/01 form as to why the sample was exceptionally high and how long the discharge continued for may include for instance, telemetry outputs or photographic evidence.

If the Wholesaler accepts the challenge then this will be taken into account when the FS is recalculated.

A Retailer may also request that a FS is reassessed part way through a review period, if for instance there has been a significant change in the Discharge and the FS value no longer appears representative of the discharge. The Retailer appeals to the Wholesaler by submitting a G/01 form and should include evidence to support the claim that the FS value is no longer representative, for example changes in production or treatment on site.

The Wholesaler may also monitor COD and TSS values from CH samples to identify where they are significantly different to the RFS value thus resulting in a significant over recovery or under recovery of costs.

Where changes to FS values are made these will be applied via the Market Operator

and the Retailer informed.

3. Use of Composite Samplers for collecting Charging Samples

The NHHC and their Retailers may, with agreement from the Wholesaler, use composite samplers to collect samples which are then analysed and the results used to determine fixed strength values for TSS and COD.

If a NHHC wishes to use a composite sampler, their Retailer should submit such requests on a G/01 Form. The Wholesaler will respond to such requests within 20 business days.

Their use is subject to the following conditions;

i. Anglian Water may withdraw the agreement if they have reasonable grounds to believe the samples being submitted for analysis are not representative of the discharge.

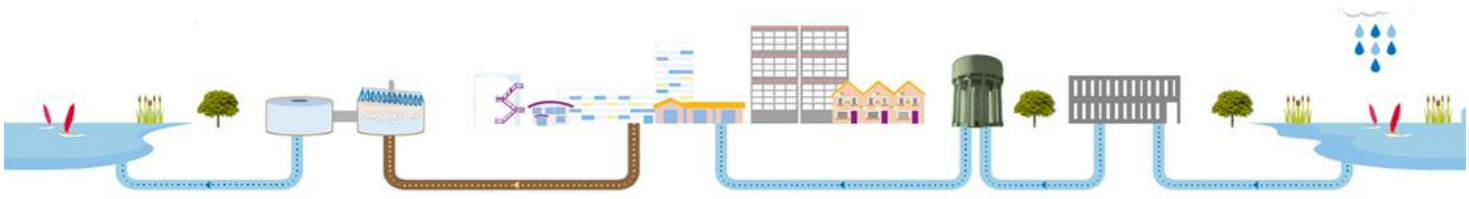
ii. Where a greater volume is collected than is required by Anglian Water, Catchment Quality staff will decant a representative portion of the sample for analysis.

iii. The NHHC and their Retailer acknowledges that the sample result is guaranteed at the time of collection, at the time when Anglian Water removes the sample from the site.

iv. The agreement will include the location and type of sampling machine and the method of sample preservation.

v. A complete sample must always be available for collection at any particular time and date. So the NHHC should collect a sample daily (but see below) and retain the previous day's sample.

vi. Unless otherwise agreed, the sample used will be one taken over a 24 hour period at regular flow or time intervals. Anglian Water may agree to a different period in exceptional circumstances relating to the nature of the discharge. For example, if the nature and composition is known to vary significantly from day to day then we may extend the sample period.



4. Trader Effluent Private Meters

4.1 Account Set Up/Volume Assessment

When issuing a new Consent, or reassessing a Consent when it is being varied, one of the exercises we undertake is to determine the 'account set up'. That is how we determine the volumes on which Wholesale charges are calculated.

The used water leaving a site does so in three general ways,

- As trade effluent; the trade volume to be charged at Wholesale trade effluent rates via Mogden formula
- As domestic wastewater; the domestic volume to be charged at Foul Sewerage rates from domestic activities such as use in toilets.
- As neither of those two; the volume not discharged and therefore not charged for, for instance it may be tankered away, leave in product or be lost as steam etc.

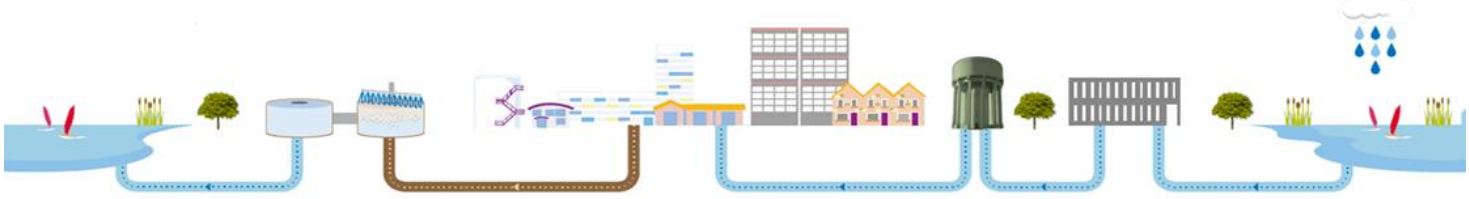
To determine the relative amounts we may ask that private meters are fitted.

4.2 Types of Private Meters

The term 'private meter' refers to meters which are owned by the Discharger and are used to calculate Trade Effluent volumes, not those owned by Wholesale Water Companies which measure potable supply to site.

These private meters may be 'sub-meters' which supply part of a site or 'Trade Effluent Meters'. 'Trade Effluent Meters' are those meters which directly measure the volume of Trade Effluent leaving a site.

If, in any part of the life-cycle of a Consent, a more accurate volume assessment is required for operational, regulatory and/or wholesale billing purposes then we may require installation of a private meter by the Discharger. Also we may require an existing private meter to be repaired or replaced if it is found to be faulty to ensure the continued accurate assessment of volume. Or similarly a NHHC may wish to fit one if they believe it will make the determination of the balance of water more



accurate.

If meters are not fitted as we request Anglian Water will make best endeavours to determine volumes however this may mean the volumes are not as accurate which may be reflected in less accurate Wholesale Charges.

Where Anglian Water believes that not fitting a sub-meter as requested is leading to a loss in income to ourselves we will require their fitting.

It is a condition in the Trade Effluent Consent that NHHCs must provide and maintain flow recording equipment if required by us. We will invoke this on the basis of volume and risk to Anglian Water.

4.3 Installing, Testing and Exchanging Private Meters

The guidance below is written to specifically support Market Codes B12-B14

Process B12: Installing Private Meters necessary for calculation of Primary Charges for Trade Effluent Services, or Trade Effluent Services and Foul Sewerage Services

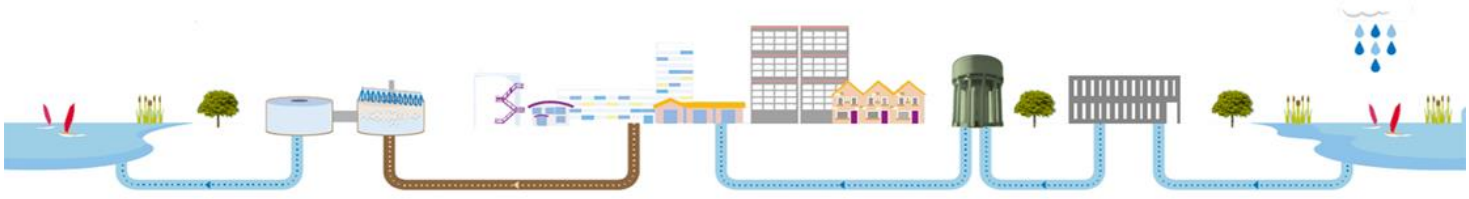
We will inform a NHHC and their Retailer by Standard Notification of the requirement to fit a meter(s) so that Wholesale charges can be calculated.

This may be when an account is set up when a Consent is issued, when a Consent is varied or at any other time in the cycle of the discharge where we believe this will facilitate more accurate assessment of the volume.

We will normally require the meter(s) to be fitted within 2 months of the Notification being sent although there may be cases where we require a shorter timescale due to grossly inaccurate data or it may be extended where further work is required to enable installation.

If the meter is not fitted within 2 months;

A 'Meter Enforcement Notice' will be sent to the Retailer and their NHHC giving notice of a deadline by which time a meter must be installed. This deadline will normally be 1 month.



In the meantime Anglian Water may apply a solution account which will allow us estimate the volumes in the best way without compromising our revenue.

It should be noted that failure to comply with a condition on a Trade Effluent Consent, for instance, one which requires meters to be fitted at our request, is contrary to the Water Industry Act 1991 section 121.

Similarly, if the photographic evidence of the meter details is of insufficient quality and after a subsequent inspection visit the meter is deemed to be inadequate in any respect, then a Standard Notification will be sent with a 2 month deadline for installation.

A 'Meter Enforcement Notice' will be sent to the Retailer and their NHHC giving notice of a deadline by which time a meter must be installed. This deadline will normally be 1 month.

In the meantime Anglian Water may apply a solution account which will allow us estimate the volumes in the best way without compromising our revenue.

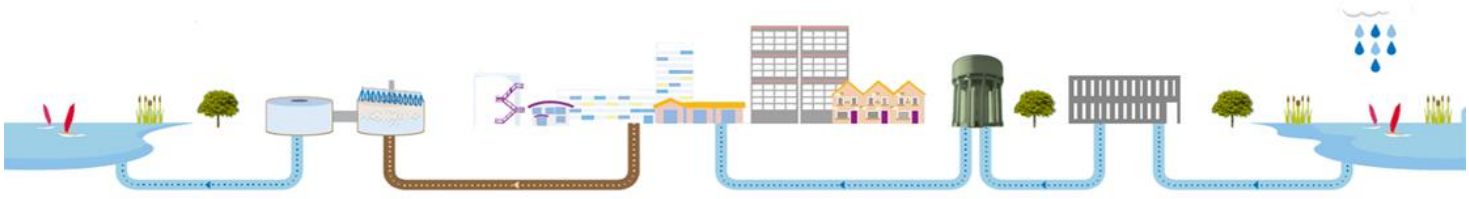
It should be noted that failure to comply with a condition on a Trade Effluent Consent, for instance, one which requires meters to be fitted at our request, is contrary to the Water Industry Act 1991 section 121.

Process B13: Testing, repairing and replacing Private Meters necessary for calculation of Primary Charges for Trade Effluent Services, or Trade Effluent Services and Foul Sewerage

A Standard Notification is sent to the NHHC and their Retailer to inform them of the requirement to repair/replace or test their TE meter(s) normally within 2 months, notwithstanding the comments in B12 above.

If it is determined after testing that a replacement or repair is required the process reverts to B12.

If the NHHC does not provide Anglian Water with the details of the test, repair or replacement, or does not subsequently provide sufficient photographic evidence, or



on inspection is found not to have carried out the work as notified, a 'Meter Enforcement Notice' will be sent to the Retailer and their NHHC giving notice of a deadline by which time a meter must be installed. This deadline will normally be 1 month.

In the meantime Anglian Water may apply a solution account which will allow us estimate the volumes in the best way without compromising our revenue.

It should be noted that failure to comply with a condition on a Trade Effluent Consent, for instance, one which requires meters to be fitted at our request, is contrary to the Water Industry Act 1991 section 121.

Process B14: Exchanging Private Meters necessary for calculation of Primary Charges for Trade Effluent Services, or Trade Effluent Services and Foul Sewerage Services

Note that this code assumes that the meter exchange has been agreed between the NHHC and Anglian Water and therefore disputes are less likely.

A Standard Notification is sent to the Retailer notifying them of the NHHC's intention to exchange their meter.

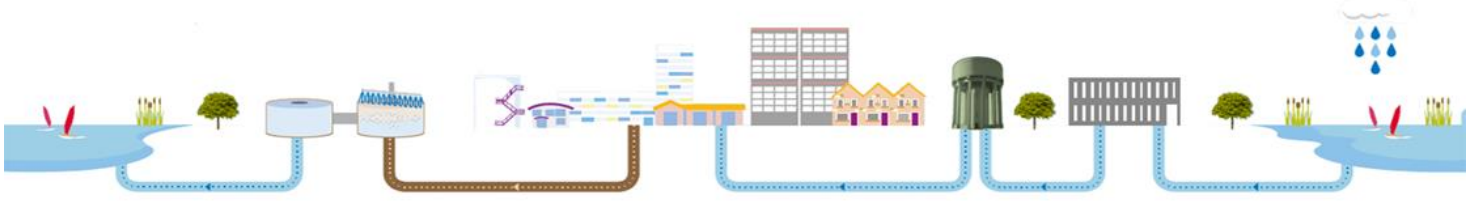
If the NHHC does not provide sufficient photographic evidence, or on inspection is found not to have carried out the exchange as agreed, a 'Meter Enforcement Notice' will be sent to the Retailer and their NHHC giving notice of a deadline by which time a meter must be installed. This deadline will normally be 1 month.

In the meantime Anglian Water may apply a solution account which will allow us estimate the volumes in the best way without compromising our revenue.

It should be noted that failure to comply with a condition on a Trade Effluent Consent, for instance, one which requires meters to be fitted at our request, is contrary to the Water Industry Act 1991 section 121.

5. Domestic Sewage Volume Assessment

Where the metered water includes domestic use, the level of domestic use will be



determined using standard assumptions (see below) and NHHC specific data. The volume calculated will be billed on the Foul Water Volumetric Charge and be subject to an annual fixed charge.

Standard assumptions are based on a region wide survey and are consistent with industry standards.

Unless otherwise assessed, the volume for domestic use will be taken as:

- 25 litres per employee per 8 hour shift or
- 50 litres per employee per 8 hour shift where the site has a canteen serving hot food and/or
- 140 litres per head per day where there is on-site residential accommodation
- All multiplied by a standard return to sewer assumption of 90%.

Pro-rata allowances are made for part time employees.

5.1 Sewerage Volume Adjustment Method (SVAM)

To calculate wastewater volumes where there is trade use, one of 5 categories of assessment are used. The application of these assessments depends on the trade type and whether a trade effluent meter is installed. On the whole these require customer data which could include meter readings and waste transfer notes.

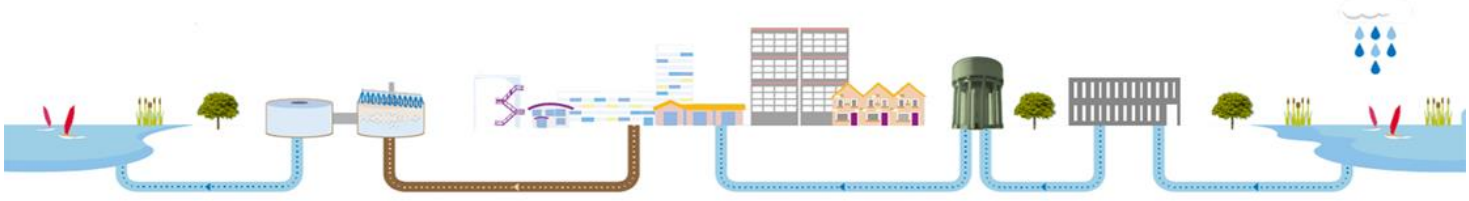
Domestic Allowance (DA) (ex- Category 1)

Trade Effluent is not metered but is derived from the water meter volume having deducted the domestic sewage volume based on headcount and any other appropriate allowances e.g. water in product or loss.

The domestic sewage volume is as previously described. The trade volume is based on an assessment by the relevant Catchment Quality Representative following discussions with the NHHC and their Retailer and using data supplied by them. Although for certain industries fixed allowances are used, see below.

For example:

- Water metered volume 100m^3



- Domestic sewage volume (4 employees x 25 litres x 260 days in year / 1000= 26 m^3 x 90% = 23.4m^3
- Trade effluent volume 100m^3 – 26m^3 = 74m^3

Any other allowance; e.g 5 % allowance for water into product is calculated thus;

- 74 x 0.95 = 70.3m^3

These assessments apply to a single discharge point.

Domestic Allowance (DA – with a split) (ex- Category 2)

Trade Effluent is not metered but is derived from the water meter volume having deducted a domestic sewage volume based on headcount and any other appropriate allowances e.g. water in product or loss.

This applies to multiple trade discharge points which are apportioned between the different points (which may have different strengths and therefore bill values).

These apportionment percentages are based on an assessment by the relevant Catchment Quality Representative following discussions with the NHHC and their Retailer, using data supplied by them.

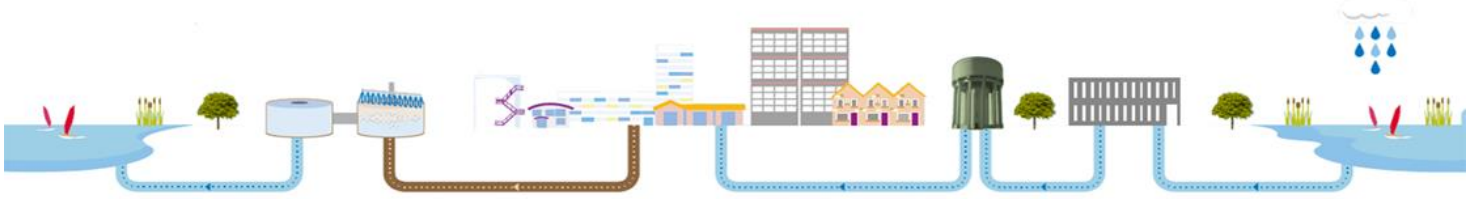
Domestic Allowance (DA or NONE) (ex- Category 3)

Trade Effluent is metered (either as a sub-meter into the process or a trade effluent meter measuring flow to the sewer), with the domestic sewage volume determined by 'headcount'.

The difference between the volume recorded by the water meter and the sum of the assessed sewage volume and recorded trade volume, is considered to be the water lost in product or evaporation.

For example:

- Water metered volume 100 m^3
- Trade effluent metered volume 60 m^3
- Domestic sewage volume (4 employees x 25 litres x 260 days in year / 1000 =26 m^3 x 90% =23.4 m^3
- Product allowance (100m3 – 60 m^3 – 23.4 m^3) = 16.6 m^3 (16.6%)



Trade Effluent meters are read by the NHHC and their Retailer and provided to CMOS. In absence of an up to date meter reading, CMOS will forecast usage based on historical or standing data.

Subtract (ex-Category 4)

Trade Effluent is metered (either as a sub-meter into the process or a trade effluent meter measuring flow to the sewer).

The difference between the volume recorded by the water meter and the recorded trade volume is considered to be domestic sewage.

This assumes no other allowances are required and no other NHHC specific information is required.

For example:

- Water metered volume 100 m^3
- Trade effluent metered volume 60 m^3
- Domestic sewage volume (100 m^3 – 60 m^3 = 40 m^3 x 90%) = 36 m^3

Trade Effluent meters are read by the NHHC via their Retailer, and provided to CMOS. In absence of an up to date meter reading, CMOS will forecast usage based on historical or standing data.

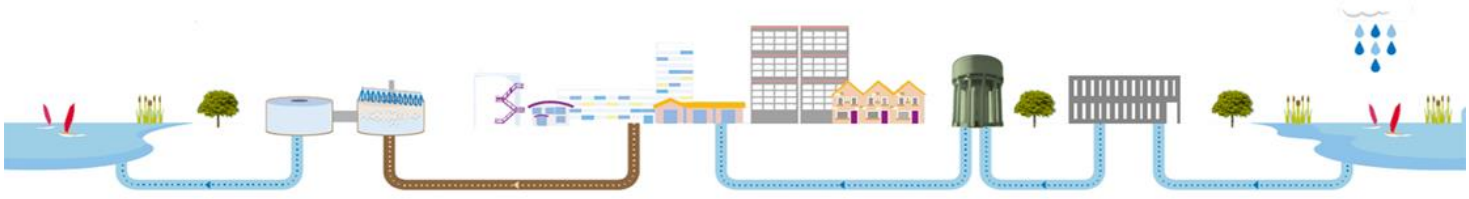
Category 5

Trade Effluent and Water Supply are unmetered. No allowances are made and a fixed charge is applied.

5.2 Trade Effluent Allowances

This section sets out standard mechanism by which the wastewater volumes from Trade Effluent premises are assessed.

Where meters are not able to calculate volumes, indirect assessments of volumes



are undertaken.

5.2.1 Volume Assessment – Non Domestic Allowance

In the absence of direct measurement, volume assessments make allowances for water used for trade purposes that is not returned to the sewer. This covers areas like ground watering, evaporation, loss, water in product, tankered off site and export.

5.2.2 Volume Assessment – Fixed allowances

In the absence of direct measurement, trade effluent volume allowances for categories 1 and 2 can be fixed for specified industries.

These fixed allowances are based on historical data and are used in agreement with the NHHC. In the absence of an agreement, NHHCs are required to justify their allowance claims with auditable data which should be regularly verified.

These values will be applied directly to all new NHHC. For existing NHHCs who have been historically on other allowance values we will transfer to the values below at the request of the NHHC or Retailer

Launderette/Laundry

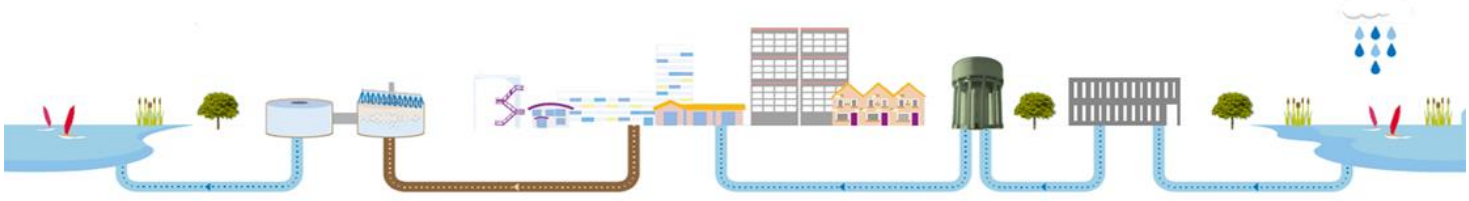
5% of trade water supplied is considered not returned to sewer due to evaporation loss.

Cooling Towers

75% of trade water supplied is considered not returned to sewer due to evaporation loss

Swimming Pools

No allowances are made for public swimming pools unless they have a sub meter installed to measure the pool 'top up' volume.



Where a top-up meter is fitted, the difference between the volume recorded by the water meter and the volume recorded by the top-up sub meter is considered to be domestic sewage.

The trade volume is based on either:

1 a) The volume recorded by the top-up sub meter less a standard 10% allowance for evaporation and other losses.

For example: where there is a sub-meter for top up but no Trade Effluent meter

- Water metered volume 100m^3
- Swimming pool sub metered volume 60m^3
- Domestic sewage volume (100m^3 – 60m^3 x 90%) = 36m^3
- Trade effluent volume (60m^3 – 10% allowance) = 54m^3

b) Or where there is a Trade Effluent meter but no sub-meter for top up

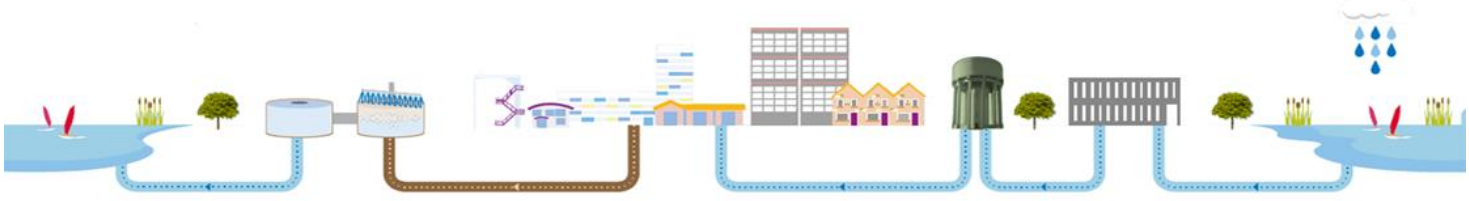
- Water metered volume 100m^3
- Backwash trade effluent meter volume 40m^3
- Domestic sewage volume (100- 40 m^3 [– 10% allowance x 90%]) = 54 m^3

2 The volume is recorded by Trade Effluent backwash meter and a top up sub-meter.

For example:

- Water metered volume 100m^3
- Swimming pool sub metered volume 60m^3
- Domestic sewage volume (100m^3 – 60m^3 x 90%) = 36m^3
- Trade effluent backwash metered volume = 53m^3

In these cases no allowance is made as the relevant volumes are calculated directly.



5.2.3 Allowance Challenge

All allowances should be agreed with the NHHC and their Retailer. In the absence of an agreement customers are required to justify their allowance claims with auditable data. Supporting data may include, production run data for items produced containing water, waste transfer notes, readings from sub meters installed to measure evaporation loss or manufacturers specification for evaporation loss.

Where possible the customer should be encouraged to install further metering into their processes, either as sub-meter or a trade effluent meter, which would negate the need for an assessment.

The Retailer may request the trade effluent allowance be reviewed through the completion of Form H/01.