

Customer Briefing Note 021

Trade Effluent

Edge Background

Edge is our flag-ship web-based software solution for retail water and waste services suppliers in the UK.

Edge has been designed and built from first principles to provide a complete “Business in a Box” for both established and new entrant Licensed Providers.

The Edge system allows seamless operations across the UK – in both the Scottish and English markets.

Edge runs on the Microsoft “Azure” cloud platform, and provides unrivalled flexibility, security and availability.

Deployment of Edge is quick and easy, whether you are a new start or the largest water company in the country.

What is Trade Effluent?

Trade effluent is any liquid waste (effluent) discharged into our sewers from a business or industrial process. This includes any waste water derived from a production process or from washing down or cooling activities including wastes from public funded activities such as municipal landfills. This can be best described as anything other than domestic sewage (toilet, bath or sink waste) or uncontaminated surface water and roof drainage (rainwater).

The table below shows examples of commercial and industrial properties that produce wastewater and whether the wastewater is classed as trade effluent or not.

Examples of trade effluent	
Yes	No
Commercial car wash	Kitchens and toilets at commercial premises
Laundrettes	Restaurants, pubs and hotels
Food and drink production	Hairdressers
Chemical manufacturers	Dentists
Metal finishers	Care homes
Engineering	Swimming pools (domestic)
Swimming pools (commercial)	

Trade Effluent Consent

Unlike domestic sewage, trade effluent is highly variable in terms of strength and volume and may contain substances that present the risk of harm to people, our sewerage network, treatment processes and the environment.

Trade effluent controls are in place to reduce these risks to acceptable levels and ensure that our network and treatment processes are not overloaded.

Trade effluent cannot be discharged without a consent, doing so constitutes a criminal offence.

A consent is a legal document issued under the regulations within the [Water Industry Act 1991](#). It is issued to the owner or occupier of a commercial or industrial property.

To apply for any of the following types of consent, the Customer should contact their retailer. Types of consent include:

- Standard
- Temporary
- Temporary multi-site
- Any variations of consent
- Name change

SPIDs and DPIDs

Normal Water and Waste services are managed within the context of the competitive market using a unique number called a Supply Point ID (SPID). A commercial property that has a Water connection will have a Water SPID and a property that has a Sewerage connection will also have a Waste SPID. It follows that “most” properties in the Market will have both a water SPID and a Waste SPID.

Where a property is registered for and has a Consent for Trade Effluent, there will also be a “Discharge Point ID” (DPID) number assigned to the property. This is a unique identifier that defines the parameters relating to the Discharge Point.

The Market Operator (MOSL and CMA) maintain all centralised data pertaining to both SPIDs and DPIDs.

DPIDs and Meters

In general, the associations between meters and DPIDs are many to many as shown in the following figure:

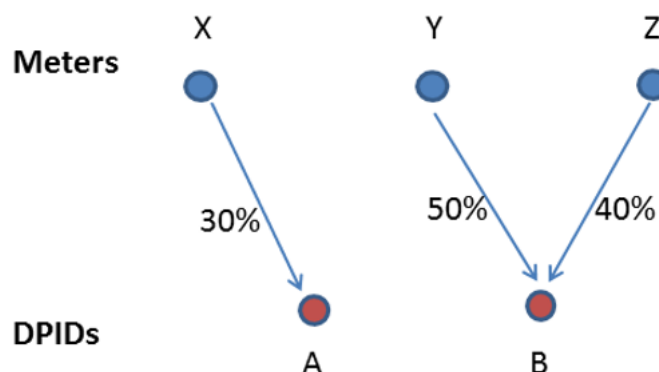


Figure 1 - DPIDs and Meters

A percentage of the Volume of each meter is associated with the DPID as shown in the diagram.

It is possible (and necessary in certain scenarios) for the percentage to be 0%. In particular, when a Domestic Allowance is being applied to a water meter but the Trade Effluent Volumes are also being measured on a Private Trade Effluent Meter, the percentage should be set to 0% on the water meter to avoid double counting of the Trade Effluent Volumes.

Trade Effluent Data

Trade Effluent data is held on the Central Systems (MOSL and CMA) and is published on a daily basis as part of the Market Data Sets (MDS).

A collection of Transactions is used to notify Trading Parties (Retailers) of any changes to the Trade Effluent data. The Retailers must then load the Transaction data to their system to allow the correct calculation of Trade Effluent prices and bills.

Trade Effluent Charging

The calculation of Trade Effluent charging is reasonably complex because there are many variables that need to be considered.

The Trade Effluent consent defines the percentage of the total waste discharged to the sewers that should be considered as Trade Effluent. Other parameters define the type of Trade Effluent discharge and strengths.

Figure 2 illustrates how a two-meter site might be considered:

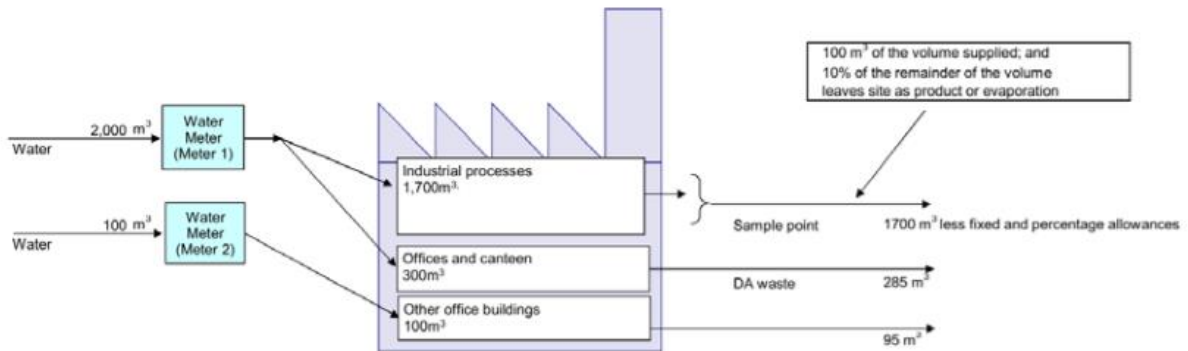


Figure 2 - Two Meter Site with Trade Effluent

Trade Effluent charges are generally based on a multi-variable formula called the “Mogden” formula. This considers the following costs (as appropriate):

- collection
- primary treatment
- biological treatment
- treatment and disposal into the sea
- biological oxidation of settled sewage
- treatment and disposal of primary sludge

The Mogden appears as follows:

$$\text{Charge per unit of effluent} = R + [(V + Bv) \text{ or } M] + B(Ot/Os) + S(St/Ss)$$

where:

R = reception and conveyance charge [p/m³]

V = primary treatment (volumetric) charge [p/m³]

Bv = additional volume charge if there is biological treatment [p/m³]

M = treatment and disposal charge where effluent goes to sea outfall [p/m³]

B = biological oxidation of settled sewage charge [p/kg]

Ot = Chemical oxygen demand (COD) of effluent after one hour quiescent settlement at ph 7

Os = Chemical oxygen demand (COD) of crude sewage one hour quiescent settlement

S = treatment and disposal of primary sewage sludge charge [p/kg]

St = total suspended solids of effluent at ph 7 [mg/litre]

Ss = total suspended solids of crude sewage [mg/litre]

The formula considers the level of treatment needed for trade effluent from a particular customer. This means that customers pay less for wastewater that is cleaner, and so easier to treat.

Edge Trade Effluent Pricing and Billing

The Edge system provides Trade Effluent pricing and billing capabilities using the Mogden formula defined above.

In Scotland, the Trade Effluent billing is based on a Retail Minus approach. In England, the billing engine utilises the Wholesale Plus approach.

Related Customer Briefing Notes (CBN's)

You may also be interested in these related CBN's

- CBN001: "Edge Overview"
- CBN002: "ADC Billing"
- CBN003: "Volumetric Adjustment"
- CBN004: "Metered Billing"
- CBN005: "Block Tariffs"
- CBN006: "Consolidated Billing"
- CBN007: "Published Tariffs"
- CBN008: "Manual and Automated Billing"
- CBN009: "Bill Output Formats"
- CBN010: "Market Transactions and Data Items"
- CBN011: "Integrated Transaction Management"
- CBN012: "Bitemporal Updates"
- CBN013: "Market Data Set"
- CBN014: "Market Pricing"
- CBN015: "SPID Transfers"
- CBN016: "CRM Module"
- CBN017: "Data Quality"
- CBN018: "Meter Reading Management"
- CBN019: "Sub Meters and Complex Metering"
- CBN020: "Meter Exchange Management"
- CBN021: "Trade Effluent"

Further Information

If you require further information on any aspect of the Edge solution, please contact us at:

Email: enquiries@cloudwater.co.uk

Phone: 01413438992