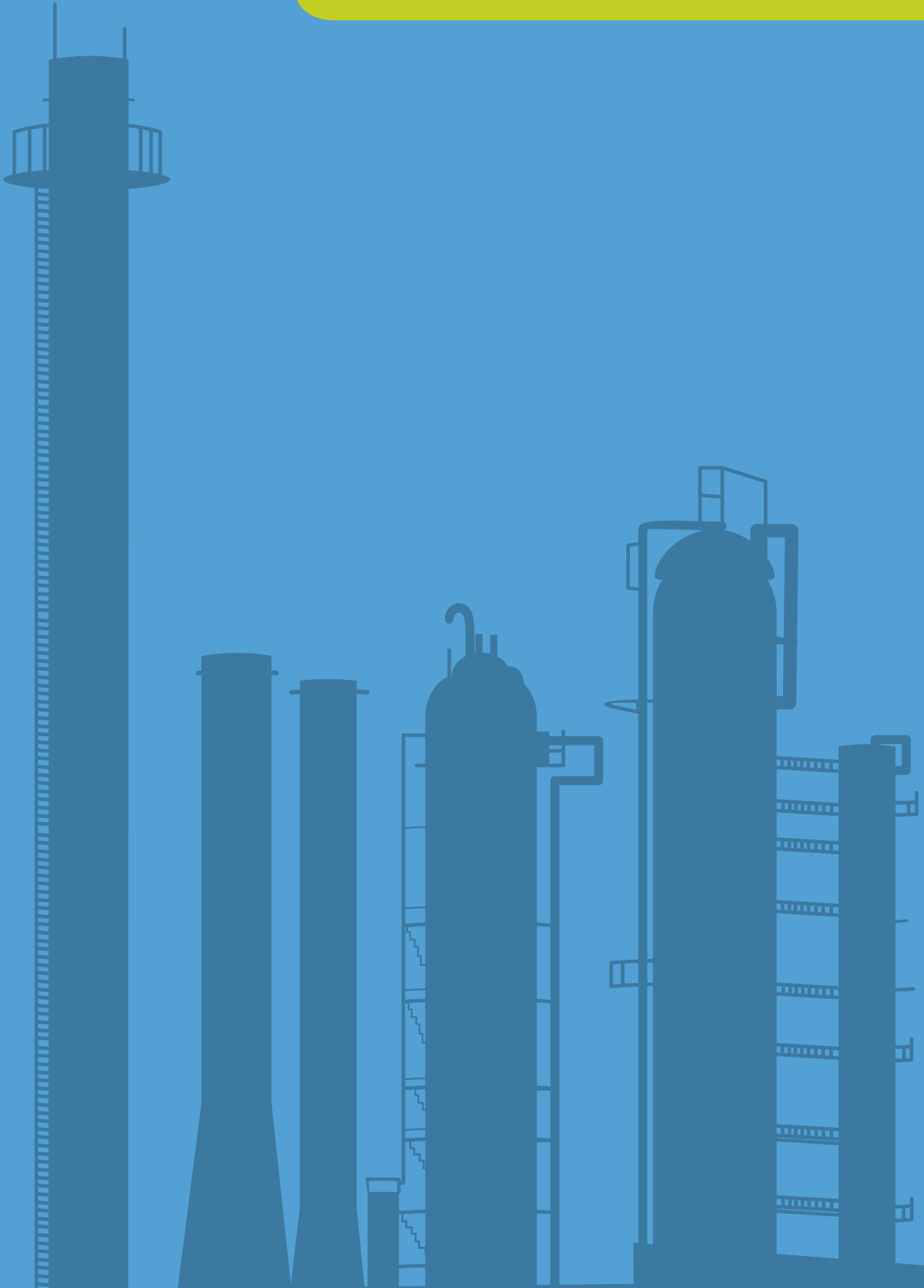




Trade effluent information leaflet

An overview of United Utilities
trade effluent control



Trade effluent information leaflet

This leaflet provides an overview of trade effluent control, obtaining permission to discharge, common parameters United Utilities may limit and pollution prevention.

About United Utilities

United Utilities provides water services to a population approaching 7 million people, covering an area that stretches from Carlisle to Crewe, and from the Irish Sea to the Pennines. Water is obtained from a range of upland, lowland and groundwater sources, treated at one of over 100 water treatment works then distributed to around 2.9 million household and business premises.

The waste water generated is collected and then treated at one of over 550 wastewater treatment works operated by United Utilities prior to returning the waste water safely to the environment. The discharge of liquid waste from commercial operations to the public sewer is known as trade effluent. On average over 200 million litres of trade effluent is discharged into the sewerage network every day.

Overview

The need for trade effluent control

United Utilities currently has over 3000 consented discharges in the region which range from launderettes to car washes to large chemical manufacturing sites. Effluent from industrial processes, if not controlled, can have harmful effects which include harm to the plants and animals of watercourses, damage to sewers, inhibition of processes used in the treatment of wastewater and health and safety impact on personnel.

Control of discharges to sewers is achieved by setting appropriate conditions in a legal document issued by United Utilities Trade Effluent department. Monitoring for compliance with the conditions stipulated in the legal document is carried out by a team of field based inspectors - Regulatory Controllers - Trade Effluent (RCTE) supported by analytical laboratories.

It is the RCTE's duty to inspect industrial premises and sample discharge streams, provide feedback and advice to the industrial customer and, if necessary, instigate enforcement procedures.

The RCTE can explain the reasons why we must impose various limits, and offer advice to help comply with consent conditions.

Information for traders

In the latter part of the 19th century a number of Acts of Parliament have been implemented to control trade effluent. The provisions related to trade effluent discharge to the public sewer network are now contained in the Water Industry Act 1991. The Act defines trade effluent as:

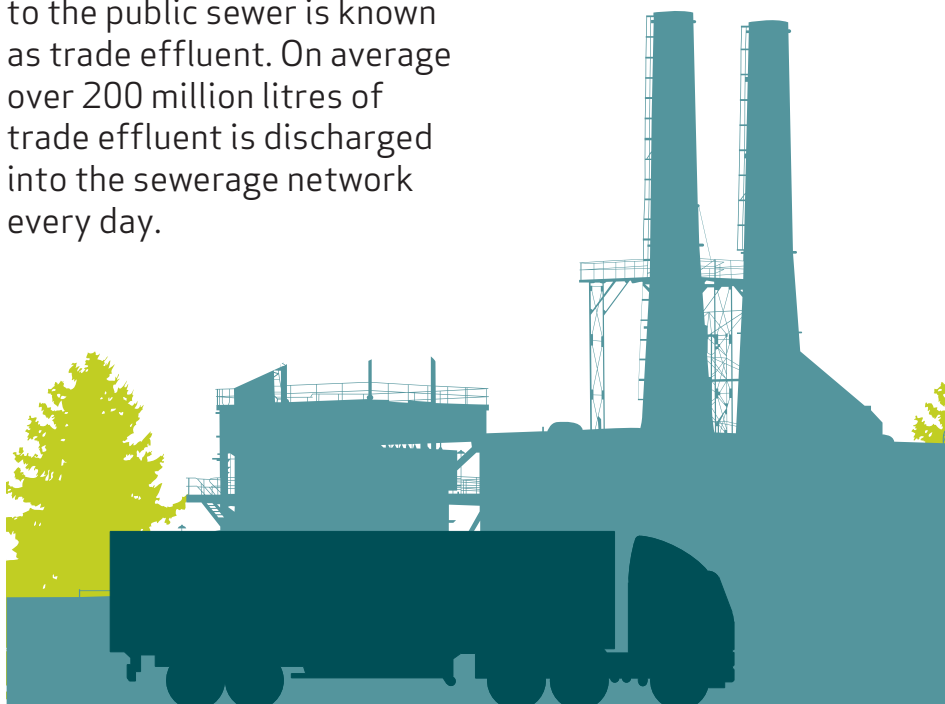
- (a) any liquid, either with or without particles of matter in suspension in the liquid, which is wholly or partly produced in the course of a trade or industry carried on at a trade premises/and
- (b) in relation to any trade premises, means any such liquid which is so produced in the course of any trade or industry carried on at those premises.

Trade effluent is wastewater derived from a trade or industrial process which is not domestic sewage (toilet sink or bath waste).

It is our performance aim to:

Visit all new trade effluent applications within 10 days of receiving notification from your retailer

Provide you with the analysis of any abnormal trade effluent monitoring sample within 20 days of taking the sample.



1. Information for customers

This section provides an outline of United Utilities' policy and objectives relating to the discharge of trade effluent.

The objectives of trade effluent control are to:

- Provide a reliable and cost reflective service to industrial customers
- Comply with the law, protect people and installations
- Prevent unacceptable effects on water resources and the environment
- Provide data regarding the volume, rate of discharge, nature and composition of the trade effluent discharge for operational purposes and for use in the design of future wastewater treatment works and collection systems
- Ensure proper management of water resources

Obtaining permission to discharge trade effluent

Discharge of trade effluent to the public sewer network in the North West may only be made with the permission of United Utilities. Permission is given by a legal document (usually a Consent) which authorises a discharge, subject to certain conditions. However there are different types of legal documents given depending on whether the discharge is to a public or private sewer and if it is temporary or permanent.

It is your responsibility to obtain permission prior to making a discharge to the public sewer network. To obtain permission you should contact your Retailer who will explain the detail required on the application form.

This form must be accurately filled out in detail, and include information on the constituents of the trade effluent discharge. This is necessary in the determination of appropriate conditions. The trader must also provide a drainage plan, showing the foul sewer to where the effluent will be discharged. The sample point must be clearly marked on the plan and surface water drainage must be clearly identified.

After receiving the application form from your retailer, we will write to you/your retailer to confirm receipt of the application, and if your application is duly made. Duly made means that we have all of the information we need to begin to assess your application. United Utilities must then either grant or refuse Consent within two months. Failure to issue a Consent within this period does not give you "deemed" Consent to discharge. Discharging to the public sewer network without a Consent or authorisation by United Utilities is a criminal offence.

If the discharge is of a "Special Category" nature we will need to refer the details to the Environment Agency and await its decision before issuing a Consent. Should this be required, the two-month period is suspended from the date on which the referral is made and re-commences from the date on which the referral is determined.

If you are unhappy with any part of your Consent, you should speak to your RCTE in the first instance. If any problem cannot be resolved between us, you can appeal to The Water Services Regulation Authority (OFWAT) at the Office of Water Services, Centre City Tower, 7 Hill Street, Birmingham B5 4UA.

When a Consent is issued it will be sent to your Company Secretary at the Registered Office, or in the case of a partnership or private business to the named partners/owners at the business or private address.

United Utilities is required under law to keep a register of Trade Effluent Consents and associated documents to which the public must be given access. The register is available to view on our website.

Varying the conditions of a consent

United Utilities may vary the conditions of any Consent by means of a Notice of Direction (Variation). New conditions imposed by the Direction are subject to appeal provisions to the Director General of Water Services. Appeals must be made within two months from the date the Direction is issued or at any time later with the permission of the Director General of Water Services.

If you wish to seek a variation in your Consent you should contact your retailer.

Consents are not transferable from one company to another. If you sell the company to a new owner, are taken over by another company, merge the company with another company or change the legal status of the company from that to which the original Consent was granted, the new company will need to apply for a new Consent. Failure to do so will mean that the discharge is illegal. (However this would not apply where the company forwards a Certificate of Incorporation to United Utilities).

Key points

- Discharge of trade effluent to the public sewer network without a Consent is a criminal offence
- It is your responsibility to obtain a Consent by application to your retailer
- Consent conditions are determined on an individual basis
- Discharges from Environmental Permitting Regulations authorised processes still require a Trade Effluent Consent
- Discharges of Special Category Effluent must be referred to the Environment Agency before Consent can be granted
- Discharges of radioactive materials require authorisation from the Environment Agency in addition to a Consent
- Breach of any conditions of the Trade Effluent Consent is a criminal offence and may render the discharger liable for prosecution by United Utilities **Water Limited**
- When returning the **application** form a drainage plan must be provided, showing the foul sewer to where the effluent will be discharged. The sample point must be clearly marked on the plan and surface water drainage must be clearly identified.



2. Parameters that United Utilities may seek to limit and control

Limit

The following is a guide to a number of physical and chemical parameters that United Utilities may limit in a Trade Effluent Consent.

This list is by no means exhaustive and, dependent on the industrial activity and materials handled on the site, United Utilities may seek to set limits for chemicals not mentioned below in order to safeguard its employees, wastewater treatment processes and legal obligations.

Organic load

Chemical oxygen demand and biological oxygen demand may be limited to prevent overloading of the wastewater treatment processes to ensure we manage our impact on the environment. Load is usually determined on an individual basis.

Suspended solids

Suspended solids can cause siltation and blockages in the sewerage system. Total suspended solids at pH7 is determined on an individual basis.

Separable oil and grease

Separable oil and grease can build up within the sewer which can lead to odour problems, blockages and subsequent foul flooding. Oil and grease can also build up on equipment such as pumps and cause operational difficulties at pumping stations and treatment works.

Ammonia

Ammonia can cause unsafe sewer atmospheres and toxicity problems in watercourses as it is highly toxic to aquatic animals. For this reason it is classified as dangerous for the environment. A guideline limit is 250mg/l, however this can be determined on an individual basis.

pH

The normal range of pH allowed is 6 to 10. Extremes of pH can lead to an unsafe working environment, affect biological treatment systems and damage the sewer fabric network.

Sulphate

A guideline limit is 1000mg/l, as Sulphate can cause damage to concrete structures.

Temperature

This is limited by statute to a maximum of 43.3°C.

Toxic metals

This group includes the metals; antimony, beryllium, chromium, copper, lead, nickel, selenium, silver, tin, vanadium and zinc. Metals can cause a range of problems. The presence of toxic metals can inhibit biological treatment processes and they

may accumulate in the environment. Total toxic metals are usually limited at 10 000ug/l.

Volume

This parameter is normally limited to a number of cubic metres per 24 hour period and a rate of discharge in litres per second and is determined on an individual basis.

Methane

Methane can cause unsafe sewer atmospheres. For this reason it is limited at 0.14mg/l.

Flammable substances

Flammable substances or substances which can produce flammable or explosive atmospheres will be prohibited or controlled to safe levels.

Hydrogen cyanide

Hydrogen cyanide is highly toxic and can inhibit treatment processes. The limit is not greater than 1mg/l.

Hydrogen sulphide

The limit for substances that can produce hydrogen sulphide upon acidification is normally 1mg/l. Hydrogen sulphide is a toxic gas that can build up in the sewer atmosphere, leading to hazardous working conditions. Hydrogen sulphide also has a very pungent odour which can cause smell nuisance.

Controlled substances

Certain substances are controlled under European directives and a list of these substances is included in the application form for a Consent (Annex 1 form G02). The list includes the metals cadmium and mercury, chlorinated solvents and a range of pesticides. These substances are controlled as they are considered persistent within the environment and can accumulate through the food chain. They can also inhibit biological treatment processes.

Other substances

Other substances that may be present in the discharge will be assessed and controlled on an individual basis.

Control

The purpose of Control is to ensure compliance with the regulatory regimes.

Control is essentially for:

- 1 ensuring the health and safety of employees and the public
- 2 the protection of Company assets
- 3 protection of the environment and drinking water quality
- 4 public health reasons
- 5 ensuring the Company complies with its own statutory and regulatory obligations

United Utilities Water Limited have an enforcement policy to ensure that preventative or remedial action is taken to return to compliance. The need for enforcement may stem from an unconsented activity, breach of Consent conditions or from some other activity.



3. Pollution prevention

Spillages from industrial sites can lead to major environmental problems if allowed to enter the public sewerage network.

Spillages can affect the foul drainage system and result in problems at the receiving treatment plant, leading to potential pollution of the receiving watercourse.

The guidelines listed below should help minimise the risk and ensure that if it does occur there is adequate containment.

Trade effluent discharges to sewer

All trade effluent streams should be discharged to the foul drainage system and NOT the surface water sewer. Private trade effluent drainage systems should be checked for leaks, siltation or corrosion on a regular basis in order to avoid ground contamination or accidental discharge into the surface water system. Trade effluent pre-treatment plants should be monitored on a regular basis in order to ensure that effluent produced meets Consent conditions.

Bulk storage and materials handling

All bulk storage of chemicals must be protected by an appropriate sized bund wall. It is recommended that the wall be of sufficient size to contain the contents of the largest tank in the tank farm and include a 10% safety margin. The wall should be impermeable to the materials that are stored, there should be no valves or drains and the bund should be checked on a regular basis to ensure that there are no breaches. Rainwater should not be allowed to build up in the bunded area and it should be checked regularly for contamination and arrangements made for an appropriate means of disposal.

Overflow pipes and filling/emptying valves should be positioned so that in the event of a spillage the contents from the pipework would discharge into the bunded area. Chemical drums should also be stored within a bunded area. Equipment should be on hand in order to prevent discharge into the surface water system.

Storage and disposal of waste

Waste should be stored in designated areas on site and in containers appropriate for the materials stored. In order to contain spillages, bunding is recommended which should be checked regularly. Waste should be removed from site on a regular basis so that large volumes do not accumulate. All hazardous materials should be labelled accordingly. Waste solvent or other low flash point liquids MUST NOT be discharged into the site sewer network.

The loading and unloading of materials should be carried out in a designated area. Care should be taken if surface water gullies are nearby. Where possible the loading area should be re-sewered to the site foul drainage system with the approval of United Utilities. Where this cannot be undertaken appropriate isolation should be installed.

Oil interceptors

These come in a range of sizes and are used where there is a risk of surface water contamination i.e. fuelling up points and vehicle parking areas and for pre-treating certain types of trade effluent discharge. Oil interceptors must be inspected and emptied on a regular basis. Wastewater containing detergent should not be allowed to enter an interceptor as this may result in an emulsion being formed and thus lead to the discharge of oil. The interceptor should be sized in order to avoid oil being flushed through during times of high flow. Interceptors should not be used for soluble oils.

Cleaning of equipment and vehicles

All washdown and cleaning operations should be carried out in a designated area on site. This area should be isolated from the site surface water drainage system and should discharge into the foul system. The effluent produced should be discharged via an interceptor in order to minimise the passage of grit and oil into the drainage network. The designated cleaning area should be clearly marked and mobile steam cleaners should be operated only in these areas.

What to do in the event of a spillage on site

In the event of a spillage on site it is essential that action is taken promptly in order to prevent or minimise any discharge to the sewerage network. Your company should have an incident management procedure in place and all staff should be familiar with it. You should contact United Utilities ICC in the event of a spillage, the emergency number is listed on our website.

Actions to minimise the impact of a spillage

- Locate the Material Safety Data Sheets for the spilled material
- Isolate all nearby drains with appropriate equipment. The company should have access to drain plugs and absorbent containment material
- If safe and practical to do so, then the leak should be stopped. This could involve isolating a valve, uprighting a container or transferring material from a damaged vessel into a suitable container. This should then be labelled
- If the spilled material has passed into the site drainage system then it is essential that United Utilities is contacted immediately with the following information:
The volume and concentration of the material spilled, the approximate volume that has entered the sewer, its physical state i.e. whether it is liquid or solid, the time the spill occurred, what on-site action has been taken and if the emergency services have been informed
- If the spill is in the proximity of a surface water drain then the Environment Agency should also be informed on the local office number

4. Frequently asked questions

Does my business need a trade effluent consent?

The Water Industry Act 1991 states that any liquid produced wholly or in part from any trade or business activity carried out on your trade premises qualifies as trade effluent and therefore requires consent from United Utilities. If your business involves the manufacture or processing of materials such as chemicals, metal finishing, food and drink manufacture or even if you operate a car wash or laundrette it is likely you will need a trade effluent consent.

Discharge of trade effluent to the public sewer network without permission given by legal documentation is a criminal offence. It is your responsibility to obtain a Consent, or an authorised legal document by application to your Retailer.

What about surface water drainage?

Trade effluent control applies only to those discharges made to the foul sewer. No discharge of trade effluent should be made to the surface water sewer; this includes vehicle washes and condensate from steam boiler systems. It is your responsibility to ensure drains on your site are identified correctly, and any trade effluent is directed to the foul sewer. Any surface water drains that you suspect are receiving contaminated surface water should be redirected to the foul sewer and a trade effluent consent applied for.

What will my trade effluent consent contain?

Any authorisation from United Utilities is likely to contain the following limits;

- A limit on maximum discharge rate (l/s) and on maximum daily volume (m³)
- A limit on the concentration of solid particulates and other organic matter
- Any substance likely to produce flammable, harmful or toxic vapours are prohibited

- The pH will be restricted between set levels
- Effluents with a temperature higher than 43.3°C will not be permitted
- United Utilities will set any appropriate condition to ensure that discharges do not cause a nuisance in the sewer network or at sewage works, interfere with sewage treatment processes, prejudicially affect any watercourse or pose a threat to the health and safety of its employees or the general public

What if my application is unsuccessful or the conditions are too stringent?

United Utilities will work with business customers to try and come to an amicable agreement to resolve any issues. It may be necessary for you to install pre-treatment prior to discharging the effluent to sewer or put in place other risk control measure to mitigate any adverse effects.

You do have a right to appeal, in the first instance you should speak to your RCTE. If any problem cannot be resolved between us, you can appeal to The Water Services Regulation Authority (OFWAT) at the Office of Water Services, Centre City Tower, 7 Hill Street, Birmingham B5 4UA.

What do I do if the nature of my business changes?

Your trade effluent consent is issued specifically in the name of your business, at the address of your trade premises and only permits you to discharge effluent specified in the consent. However, a consent can be modified on request as long as the limits are acceptable. You must give United Utilities no less than seven days written notice of any of the following:

- any change to the process or the process materials or any other circumstances likely to alter the constituents of the trade effluent

- any change to the name of your business / partnership
- a change of ownership of the business premise

What do I do if I move premises or cease trading?

In the case of moving premises you should contact your Retailer. Your current consent is only applicable for your current trading address. If applicable the Retailer will be able to provide the necessary paperwork for the application to discharge trade effluent from your new premises.

If you are ceasing to discharge trade effluent you will be required to return your consent to United Utilities and your Retailer should submit a notification on a G02 form.

What happens if the discharge is in breach of my consent?

Your RCTE will provide you with analysis results for every sample taken from your premises so you can keep a record of your compliance. Your RCTE will contact you if the discharge exceeds any of your parameters, he or she will be available to discuss the matter in more detail.

What do I do if I can't discharge to sewer?

If your trade generates waste that can't be discharged to sewer because it has been deemed unsuitable for discharge or you do not have access to the public sewer your waste can be removed from site by tanker and treated at a waste management centre.

