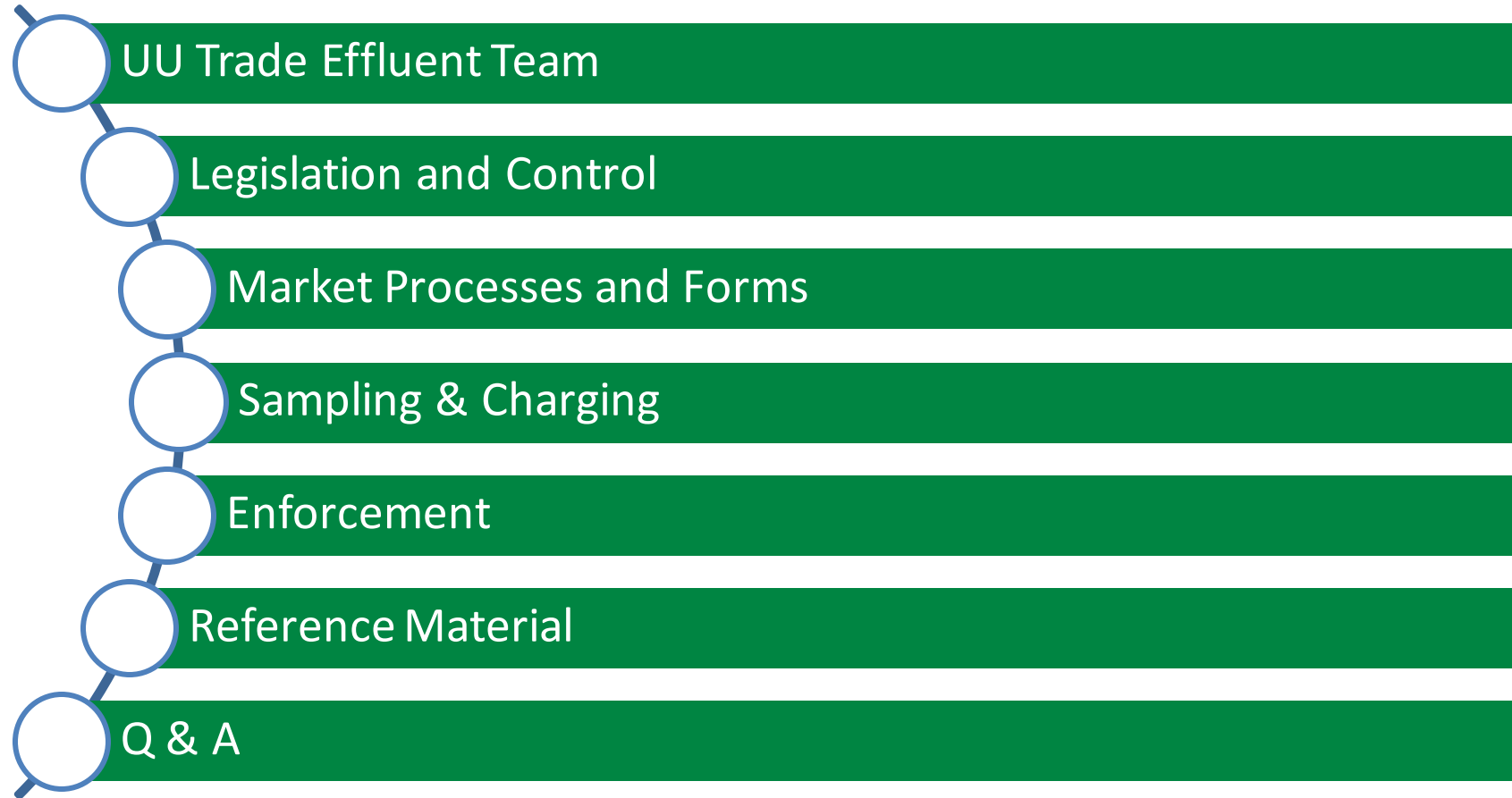




# United Utilities Retailer Event

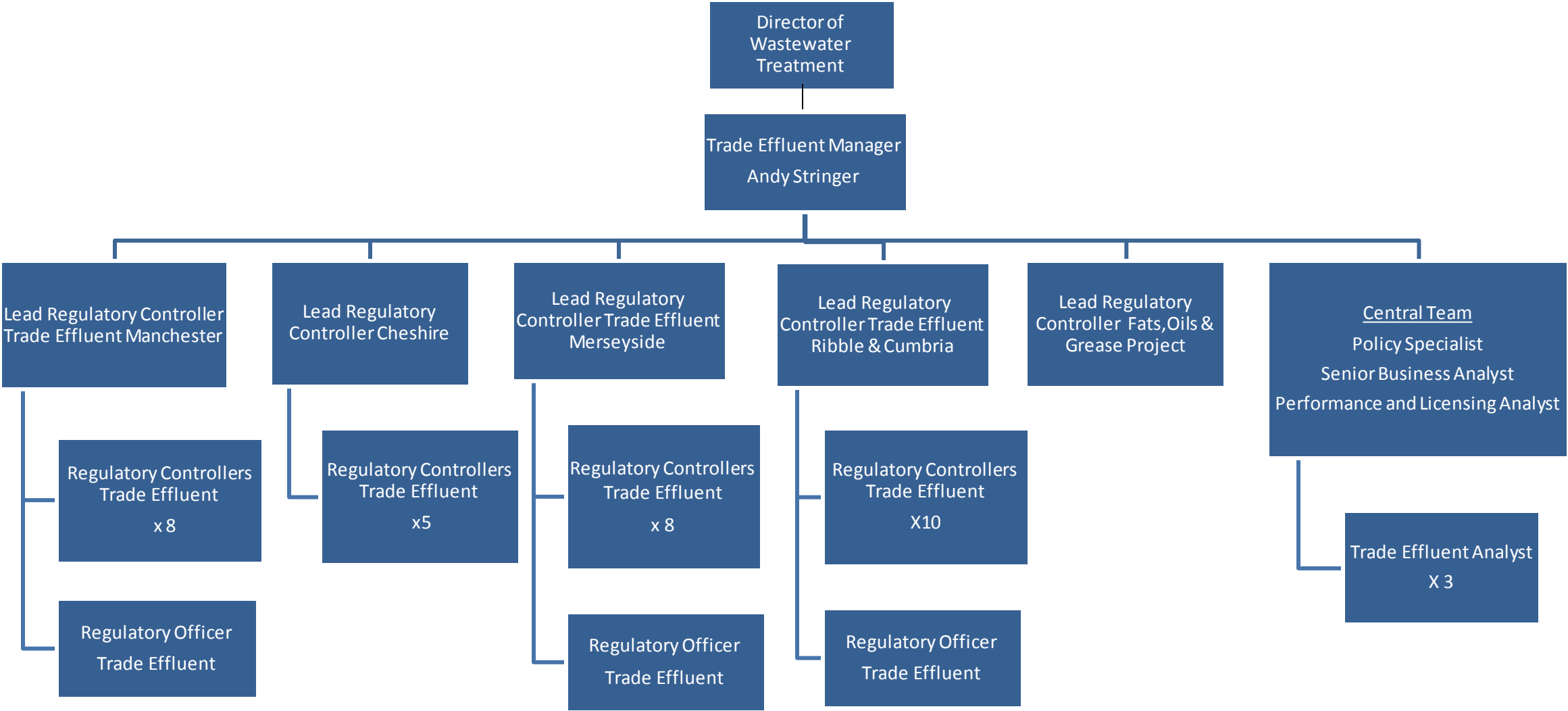
Monday 17<sup>th</sup> May 2021

# Trade Effluent Overview – Andy Stringer (Trade Effluent Manager)



# UU Trade Effluent Team

# Trade Effluent Team Organogram



# Legislation and Control

## What is Trade Effluent?

The provisions related to trade effluent discharges to the public sewer network are contained in the Water Industry Act 1991 (WIA91), where it is specifically defined. More simply...

Trade effluent is any liquid waste (effluent) discharged into the public sewer from a business or industrial process. This includes any waste water derived from a production process, washing down or cooling activities and includes effluent from public funded activities such as municipal landfills.

Essentially anything other than domestic sewage (toilet, bath or sink waste) or uncontaminated surface water and roof drainage (rainwater).

Examples of commercial and industrial properties that produce wastewater and classified as trade effluent or not.

Yes	No
Commercial car wash	Kitchens and toilets at commercial premises
Laundrettes	Restaurants, pubs and hotels
Food and drink production	Hairdressers
Chemical manufacturers	Care homes

# Why Control Trade Effluent?



Compliance  
Water Industry  
Act 1991



# Legislation

- The WIA91 sets out the regulatory framework within which the Wholesaler operates and identifies the statutory responsibilities and regulatory framework that applies to sewerage undertakers.
  - Part II, Chapter 1 – appointment and regulation of undertakers
  - Part IV, Chapter 1 – Wholesaler general functions
  - **Part IV, Chapter 3 - trade effluent**
- Premises connected directly or indirectly to the public sewer or to one of our wastewater treatment works, and discharging trade effluent (whether on a permanent or temporary basis), requires a trade effluent Consent or Agreement
- Additionally the Urban Wastewater Treatment Regulations, 1994, (schedule 4) places a statutory duty on Wholesalers to provide and maintain collecting systems and treatment plants.



# Types of Control

## WATER INDUSTRY ACT 1991

### CONSENT TO THE DISCHARGE OF TRADE EFFLUENT

**Consents** to discharge are issued, conditionally or unconditionally, under S121 of WIA91 to the occupier of a trade premises and requires that the discharge is made to the public sewer.



**Agreements** may be entered in to by the sewerage undertaker under S129 of WIA91 with the owner or occupier of a trade premises regarding the reception and disposal of trade effluent produced on those premises. Typically structured as a consent, however can be configured to include additional clauses and responsibilities.



**Special Agreement** is introduced when a customer requires us to provide a service which we are currently unable to provide, or they require a service not covered by the charges scheme that reflects the specific and different circumstances or characteristics of that customer. A special agreement therefore has to be robustly cost justified with all supporting evidence being provided in order for a tariff to be calculated

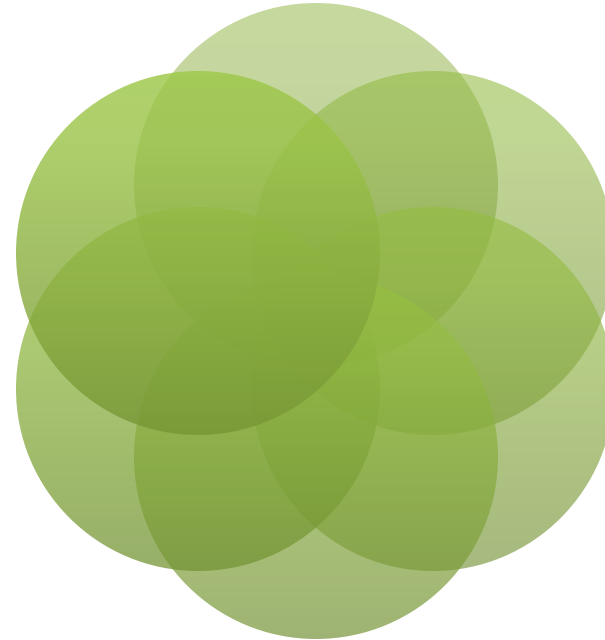
## WIA 91 - Specific Trade Effluent Sections

**S118** – Consent required for discharge of TE into a public sewer. All dischargers of Trade Effluent must obtain consent prior to discharging. Enforcement can be taken for discharge without consent.

**S119** – Application for consent. The occupier must disclose the nature, composition and volumes. Enforcement can be undertaken for non disclosure of substances, discharging substances not consented for or discharging out of consented parameters.

**S204** – Provision of information to SU with respect to trade effluent discharges. This details the requirement to provide plans

**S125** – variation within 2 years of consent. This is subject to specific criteria.



**S121** – Conditions of consent. Parameters are set based on the application, associated risks and local conditions. Monitoring is undertaken against conditions set in the consent & enforcement is undertaken for the exceedance of condition(s) in a consent or discharge of substance not consented.

**S124** – Variation of consent. This provides for variation to a consent after 2 years .

**NOTE:** It is important requests for reviews are acted upon as this is a statutory requirement.

# Market Processes and Forms

## Market Processes and Forms Summary –

G1 – Enquiries to Wholesaler using market form G/01

G2 - Application for a Consent using market form G/02

NOTE : this process using also be used for temporary Consents using market form G/03

G3 - Variation of existing using market form G/02

G4 – Notification of results of analysis

G6 – Termination of Consent market form G/02

B12-14 – installation, test and repair of private TE meters using market form G/01

H1A – Application for an allowance – H1



## Can be used for

- Basis of charge enquiries
- Requests for meetings/site visits
- Sample strength enquires/Sample queries
- Requests for technical information for NHH customers.
- Notification of private meter activity B12-14 process

# Consent Applications

## Permanent Consent

- A consent that is issued in respect of a trade effluent discharge that will be made for a period **in excess of 6 months** duration from a defined premise.
- This type of consent is neither time limited nor temporary.
- Formal termination required
- Uses market form G02

## Temporary Consent

- Consent is issued in respect of a trade effluent discharge that will be made for a period **not exceeding 6 months.**
- Time limited
- Use market form G03
- UU also permit mobile activity through the use of this form via an agreement.

# Form G/02:

## Trade effluent discharge notice

For use by Retailers

### 2. Type of application

Please indicate which of the following this application relates to by ticking one relevant box

- |  |                          |  |
|--|--------------------------|--|
| a) Proposed discharge for which no consent exists  | <input type="checkbox"/> | Please complete sections 3 to 9  |
| b) Variation to an existing consent  | <input type="checkbox"/> | Please complete sections 3 to 9  |
| c) Renewal of existing consent after discontinuation   | <input type="checkbox"/> | Please complete section 3.1 and note any other change, if any, to the discharge in the relevant sections |
| d) Change of occupier at the consented premises (including a change in legal identity of the occupier, i.e. a change in Companies House registration number) | <input type="checkbox"/> | Please complete sections 3 to 9; note that this will be an application for a new consent                 |
| e) Change of name of owner or occupier at the consented premises, where Companies House registration number does not change                                  | <input type="checkbox"/> | Please complete section 3  |
| f) Discontinuation of Trade Effluent Services  | <input type="checkbox"/> | Please complete section 10   |
| g) Termination of consent  | <input type="checkbox"/> | Please complete section 10   |

The Non-Household Customer must complete the declaration in section 11 and the Retailer must complete section 12 and the declaration in section 13.

Where there is an existing consent for the discharge, please provide the consent reference number

Trade Effluent Consent reference number .....

## Guidance on how to complete a G02 form can be found here

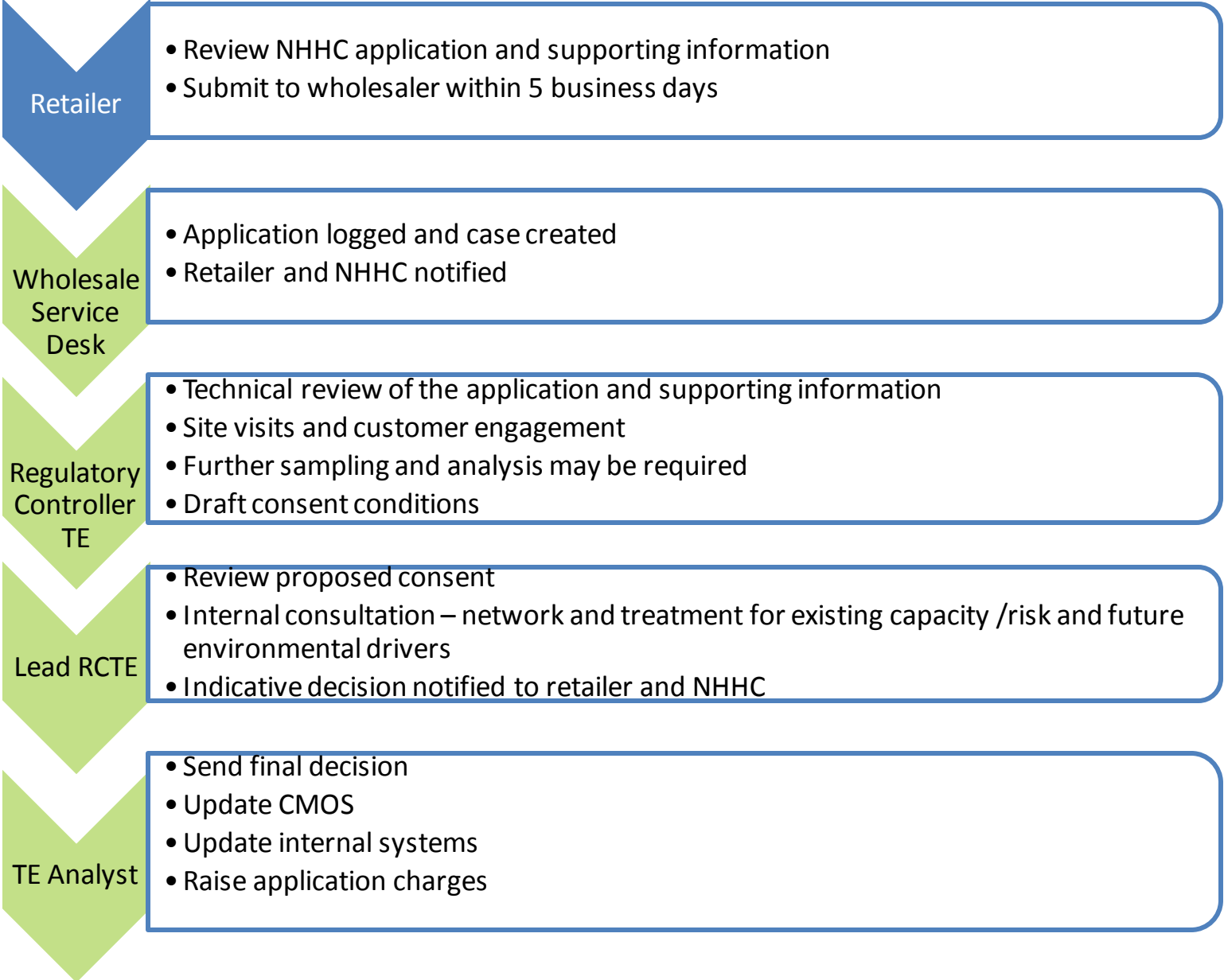
<https://www.mosl.co.uk/documents-publications/2775-guidance-for-form-g02-completion>

- a) This is for a **brand new application**, where no Consent currently exists.
- b) This is where a Consent already exists but there is a change required to the existing conditions. (This is known as a **direction/variation** to the current Consent.)
- c) **Not used by UU.**
- d) This applies where the site has a **new occupier**, as a consent is non-transferable.
- e) This only applies where a **Certificate of Incorporation** can be provided, clearly showing an audit trail on Companies House with the original consented name.
- f) **Not used by UU**
- g) This is only to be completed where the consented discharge has **permanently ceased**.

Form updated Sept 2018 key changes:

- Simplified, shortened and reordered in some areas
- List of substances removed replaced by a link to MOSL website for high risk substances

# Consenting journey – application to issue





# Sampling & Charging

# Sampling

- Trade effluent sampling frequency is based on risk and income
- Samples should be taken from the designated sample point
- Sample point must capture all flows and representative of the final discharge to public sewer
- Sample point should not contain domestic sewage
- A composite flow proportional sample provides the best representation of the effluent - multi-day, refrigerated and linked to the effluent meter
- Snap or spot samples can be used if a composite sampler is not practical
- Sampling events are unannounced and randomised
- Charging samples taken for Suspended Solids (St) and Chemical Oxygen Demand (Ot)
- Monitoring samples are taken to ensure compliance against consented parameters where applicable – metals; ammonia; methane etc.
- Analysis undertaken at our UKAS accredited laboratories in Warrington
- Circa 1000 samples taken per month

## Formal sampling

- Evidence gathering as part of enforcement action
- Dedicated and traceable equipment
- 3 portions of the sample taken - wholesaler, customer and a reference sample
- Chain of custody records from sampling to analysis



Composite sampler

# Samples



# Mogden Formula

$$C = (R + V + B1) + (B2 \times Ot/Os) + (S \times St/Ss)$$

C = Charge rate

R = Reception and conveyance (large and standard user values)

V = Preliminary and primary treatment

B1 = Biological treatment (capital element)

B2 = Biological oxidation (based on chemical oxygen demand)

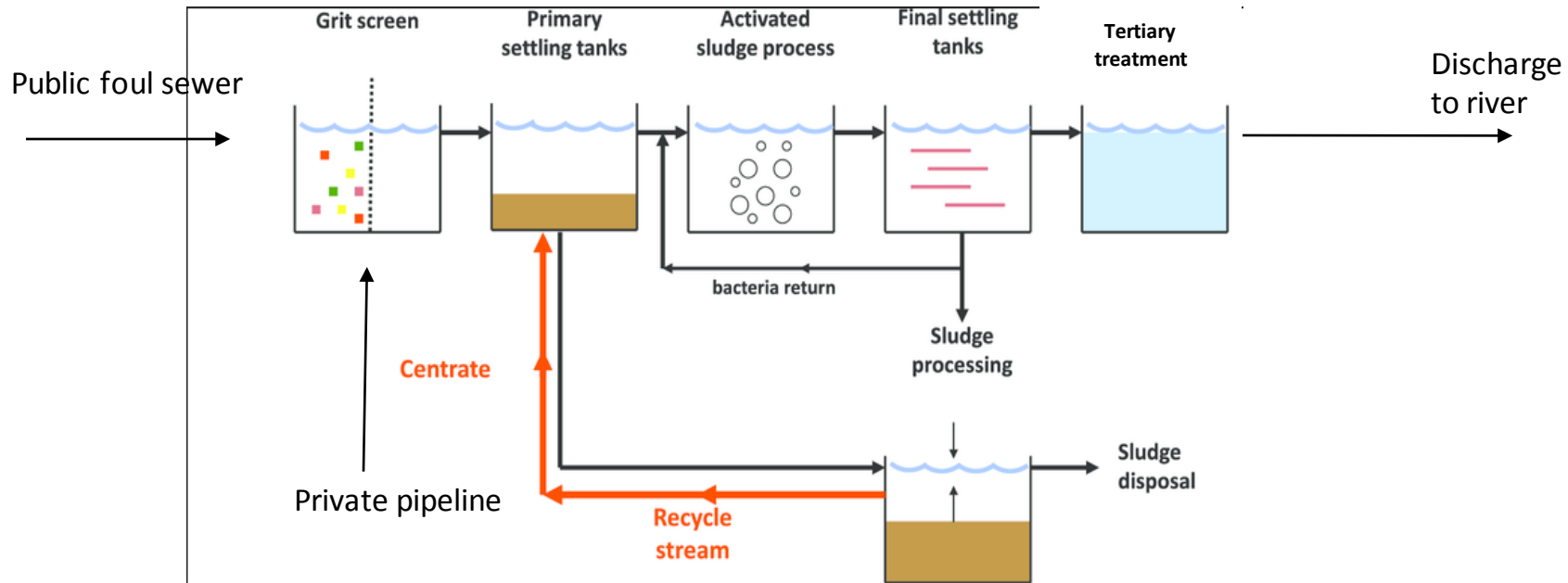
S = Sludge treatment and disposal (based on suspended solids)

NOTE:

B2 factor has a direct relationship with the chemical oxygen demand of the effluent (red font above).

S factor has a direct relationship with the suspended solids of the effluent (blue font above)

Factors can be added and removed dependant on how effluent is received, typically only R will be removed where a private connections to the receiving works exists



# Strength Determination

Trade effluent operational parameters (Ot and St) used to determine effluent strength will be derived from the analytical results of samples taken from the trade premises in the previous calendar year (January to December).

Where limited or no sampling data is available, we will determine strengths to be used for charging purposes based on the following:

- 1. representative data from similar discharges
- or
- 2. samples taken over a different period but which can be shown to be representative

Operational parameters are generally fixed annually for the charging year. A regional fixed strength may also be determined for particular effluent types where appropriate e.g.. Launderettes

Where it becomes apparent that the operational parameters being used for charging are no longer representative of the effluent strength across the charging year, then we may reassess the strengths from the date this becomes apparent. Formal requests for modifications to strengths within the charging year will be considered and if agreed by us will be applied from the date of application. Examples of this would be where a process change occurs or treatment is introduced.

**UU charging strength methodology types:**

Strength Definition	CMOS
Annually calculated based on samples	1YRFST
Agreed strength following a study	CONTINFIXST
Weighted average of discharges	OTHER
No discharge being made on a live consent	NOMOGDEN

# Allowances

## **Domestic allowance :**

Based on a headcount provided - allocation of 25 or 50 litres/person/ day is applied (canteen /no canteen)  
Calculated as an annualised value in m3 based on number of working days declared

## **Other allowances:**

Water in product e.g. baking or beer manufacture as a known volume or as a percentage of water supplied  
Evaporation - steam loss as a percentage of water supplied  
Tankered off site - strong or high risk effluent unsuitable for discharge - a known volume

A site could have a combination of these and each type needs to be evidenced via an auditable calculation or measurement which should be provided on request and may be reviewed at any time.

Can be complex and therefore an effluent meter or sub-metering of the site can simplify the approach

## **Review**

Obligation of the NHHC to advise of any changes to allowances via H1 form  
Changes to allowances can only be applied from the date of notification

# Volume assessment

The method of determining the TE volume is stated on the cover letter issued with the Consent and notified to NHHC and retailer

## Approaches

**1. Water meter minus allowances** - this is the most common approach

**Market formula:**

**TE Volume = (100% - Percent Allowance %) × (Metered Volume – [Domestic Allowance] – Fixed Allowance) + Calculated Discharges + Volumetric Adjustments**

Reminder : Any updates to allowances must be submitted on the H1 market form and will be applied from the date of application

**2. Private meters** - direct measurement of the effluent

Avoids the need for allowances

Customer owned asset

Requires calibration and maintenance

Wholesaler is responsible for initial data entry

Retailer has an obligation to provide meter readings in CMOS and notify of asset data changes to the Wholesaler

MPS 9 - implications for delays in updating CMOS

**3. Calculated discharge** - Complex or unmeasured volumes

Examples - contaminated rainfall, batch release processes (tanks and vessels), multiple and or complex calculations where metering is not possible.

Can be a fixed volume or may require information from the NHHC to update volume at the correct frequency.

# Enforcement



## Enforcement - An Overview

- A Consent is a legal document and compliance with the conditions is therefore a legal requirement under criminal law – specifically WIA91 S121.
- Enforcement of consent conditions sits with the sewerage wholesaler.
- Breaches of consent can result in prosecution of the offender.
- UU has an enforcement policy to ensure a consistent and transparent approach.
- Breaches that would be covered by the enforcement policy include:
  - Non compliance with consented limits – these can lead directly to prosecution
  - Failure to provide the wholesaler flow data of volumes of effluent discharged
  - Failure to provide the required sampling equipment related to the required specification, including a safe and readily accessible sample point
  - Restricting the access of sampling staff to the NHH site for the purpose of sampling.
- Compliance with the NHH customers consent is a matter between wholesalers and NHH customers.
- Any activity undertaken by the wholesaler in this matter does not need to be in conjunction with the retailer - “Nothing in these Operational Terms shall prevent the Wholesaler from exercising statutory powers of investigation or enforcement.”

# United Utilities Enforcement Policy

United Utilities regards prevention as better than cure and offers information and advice to those it regulates and seeks co-operation. It also encourages individuals and businesses to incorporate best practice into normal working methods.

UU enforcement policy ensures proportionate response to a criminal offence that is committed.

Where a criminal offence has been committed and in order to secure compliance we will consider:

**issuing a warning**  
**administering a caution**  
**instituting a prosecution**

These mechanisms are distinct from other legal remedies that may be available to the Company, such as a civil action for damages and/or an injunction.

# Reference Material

# Incident Management

If there is an incident on site that could result in the discharge of material into the sewerage network action needs to be taken to minimise the potential impact on:

- **Health & safety of personnel working on the network or at the receiving treatment plant**
- **The environment**
- **UU assets**

Actions to take in the event of Incident/Spillage:

- The NHHC should contact UU directly on [0345 672 3723](tel:03456723723) - Do not delay
- As far as possible prevent the spilled material from entering any drains on site.
- Dependant on the site and process the NHHC may need to contact the Environment Agency.

# Useful reference material

Miscellaneous TE Guidance

<https://www.mosl.co.uk/documents-publications/3426-trade-effluent-miscellaneous-guidance-1/file>

Jargon buster

<https://www.mosl.co.uk/search-results?searchword=trade%20effluent&searchphrase=all&start=20>

Guidance for charging strength terminology

<https://www.mosl.co.uk/search-results?searchword=trade%20effluent&searchphrase=all&start=20>

Completing the G02 form

<https://www.mosl.co.uk/documents-publications/2775-guidance-for-form-g02-completion>

# Thank You