

August 2021

# **Final decision on a trade effluent dispute against Wessex Water Services Ltd**

**Final decision for a dispute under section 126 of the Water  
Industry Act 1991**

**Complaint against Wessex Water about amendments to a  
trade effluent agreement**

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## 1. Introduction

### A. The complaint

- 1.1 This is a final determination of a dispute referred by [REDACTED] (“**the Complainant**”) to the Water Services Regulation Authority (“**Ofwat**”), on 16 January 2020 for determination under section 126 of the Water Industry Act 1991 (“**the Act**”).
- 1.2 The dispute is between the Complainant and Wessex Water Services Ltd (“**Wessex Water**”) and is about the Complainant objecting to the variation of its trade effluent consent by Wessex Water.

### B. Purpose of this document

- 1.3 This is our final decision on this dispute. It sets out the determination we have made following our consideration of the legal framework for appeals under section 126 of the Water Industry Act 1991 (“**the Act**”) and the evidence provided to us by both parties.
- 1.4 Now we have issued our decision as final there are no routes of appeal if either of the parties disagrees with our final decision. At this point, the only route of challenge to our final decision is via judicial review proceedings. Judicial review claims must be submitted promptly and within three months from the decision to be challenged.
- 1.5 If any party considers that specific information provided in their representations is commercially sensitive and/or confidential, they should make us aware of this. In doing so, they should clearly set out the reasons why, in their view, it should not be disclosed, and provide, alongside their full response, a non-confidential version of the document(s) that could be shared with another party. If we consider that disclosure of the information to another party will facilitate the exercise of our functions, and we do not consider that the reasons provided amount to sufficient justification to withhold disclosure, we will give the party submitting the information notice that we intend to disclose the information in question and will give that party the opportunity to explain further why they believe that it should not be disclosed. We will not accept blanket requests for confidentiality or requests not supported by specific and clear reasons.

## **C. Overview of our determination**

- 1.6 Our final decision is detailed in [Chapter 6](#) of this document, but is summarised below.
- 1.7 In light of the legal framework of the Act and the evidence we have gathered from the parties to the dispute, we have determined that Wessex Water's variation to the trade effluent consent between itself and the Complainant is appropriate, and should stand.

## 2. Background

### A. The Parties

#### Complainant

2.1 The Complainant is the owner of the Site.

#### Company

2.2 Wessex Water is appointed under the Act to provide water and sewerage services to customers on the Site.

### B. The Site

2.3 The Site is located at [REDACTED] The Complainant owns the business at the Site.

### C. The trade effluent dispute

2.4 The Complainant is a company that runs a butchery operation to prepare fallen stock for feeding to hunt hounds. To run this operation it requires a trade effluent consent which Wessex Water issued effective from 5 March 2007.

2.5 Since March 2007, the discharge from the Site has routinely breached the discharge consent limits, set out below, at 2.8, and at Appendix 1.

2.6 As a result of this, Wessex Water took a number of actions. This included a drainage upgrade at the Site to bring the discharge quality closer to the requirements of the consent, and to ensure clarity on the trade effluent versus normal sewage discharge from the Site. The Complainant also started to empty its settlement tank on a monthly basis to further reduce the discharge strengths to the Newton Water Recycling Centre (“**the WRC**”), the treatment facility which serves the local area, including the Site.

2.7 Despite taking the actions mentioned above, on 20 November 2019 and in accordance with its [‘Trade Effluent Discharge to Public Sewer Guide Maxima for Common Substances’](#), Wessex Water decided to issue the

Complainant with revised consent conditions for the Site, by means of a variation to the existing consent.

2.8 The relevant revised conditions are as follows:

- pH of 6 to 10, reduced from 6-11;
- a daily discharge limit of 2m<sup>3</sup> per day no change from the original consent;
- a rate of discharge of 1l per second no change from original consent
- suspended solids<sup>1</sup> of 1000mg/l, increased from 400mg/l;
- chemical oxygen demand (“COD”)<sup>2</sup> of 10,000mg/l, increased from 1000mg/l;
- ammonia of 250mg/l, increased from 50mg/l; and
- chloride at 3000mg/l, no previous limit set.

2.9 The main reason for the revised trade effluent consent conditions was the impact of chloride on the WRC and the surrounding environment. Wessex Water reviewed the samples for the Site alongside the effluent consent conditions and subsequently shared with the Complainant a spreadsheet showing details of the continuous breaches that had led to this variation.

2.10 Implementation of the new conditions was due to start on 20 January 2020, unless appealed on or before this date. The Complainant lodged a formal appeal with Ofwat on 16 January 2020.

2.11 Wessex Water intends to enforce the revised consent conditions as it considers sample results taken from 2017-2019 show the revised consent conditions are achievable but will require the Site to improve its onsite treatment of the effluent before disposal.

2.12 Samples taken show that the Site continues to fail consent limits for the existing consent. However, in light of this appeal, Wessex Water is not currently enforcing the failures, as the changes above have not yet taken effect as a result of this.

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<sup>1</sup> The portion of fine particulate matter that remains in suspension in water, and will require treatment to reach an acceptable level for discharge.

<sup>2</sup> A measure of the amount of oxygen that can be consumed by reactions in a measured solution. This is a measure of organic matter content, which will require treatment to reduce the amount of organic waste before discharging into receiving waters.

- 2.13 The parties have met on several occasions to discuss the new consent notice. Most recently in February 2020, when agreement was not reached. The parties are, therefore, awaiting Ofwat's consideration of the appeal and subsequent determination as to whether the new discharge requirements are reasonable.
- 2.14 We conducted a preliminary assessment of the appeal and on 22 April 2020 we agreed to accept the appeal. Our reasoning for accepting the appeal is set out in sections 3 and 4 below.
- 2.15 We issued a draft decision on this appeal on 16 December 2020.

### 3. Legal framework

3.1 This section outlines the legislative provisions relevant to this case.

3.2 Under section 118 of the Act the owner or occupier of any trade premises must obtain the consent of a sewerage undertaker before it may discharge trade effluent into public sewers. Section 141(1) of the Act states that trade effluent:

(a) means any liquid, either with or without particles of matter in suspension in the liquid, which is wholly or partly produced in the course of any trade or industry carried on at 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,

3.3 Section 141(1) of the Act confirms that trade effluent does not include domestic sewage.

3.4 Pursuant to section 119(1) of the Act, the owner or occupier of any trade premises may serve notice on the sewerage undertaker an application requesting consent for it to discharge trade effluent into that sewerage undertakers public sewer system. Section 119(2) of the Act states that an application for consent to discharge must set out:

- the nature or composition of the trade effluent;
- proposed steps to be taken to minimise the polluting effects of the discharge on controlled waters and the impact of the discharge on sewerage services;
- The maximum quality of the trade effluent which is proposed to discharge on any one day; and
- The highest rate at which it is proposed to discharge the trade effluent.

3.5 Section 121 of the Act states that when granting consent to the owner or occupier of any trade premises to discharge trade effluent into its public

sewer system, a sewerage undertaker may impose a number of conditions.

- 3.6 Section 124(1) of the Act allows a sewerage undertaker to give a direction varying the conditions attached to any consents made specifically under section 118, and generally under ‘Chapter III Trade Effluent’ of the Act. A sewerage undertaker may not give a variation direction within two years from the date of the initial consent or within two years from the date of any prior variation direction. The sewerage undertaker must give the owner or occupier notice of any such variation (section 124(5) of the Act). This must include reference to the owner or occupier’s right of appeal under section 126 of the Act. It must state the date from which the direction will take effect; this must be no less than two months after giving the notice.
- 3.7 Section 126(1) of the Act allows the owner or occupier of any trade premises to appeal to Ofwat about any section 124(5) notice issued to it. It must do this either within 2 months from the date of that notice or if after two months, with Ofwat’s permission. Section 126(4) of the Act states that on appeal, Ofwat may annul the direction given by the sewerage undertaker and substitute for it any other direction, whether that direction is more or less favourable to the appellant. It also states that any direction given by Ofwat may include provision as to the charges to be made for any period between the notice given by the sewerage undertaker and Ofwat’s determination of the appeal.
- 3.8 In addition, Ofwat’s [approach to considering trade effluent consent appeals under section 126 of the Act](#) explains that:

Appeals will normally be decided in light of Ofwat’s understanding of the practical and financial consequences for both sewerage company and discharger. Health and safety requirements will be taken into account and consideration given to any substances likely to damage sewers, or cause special difficulty (or expense) in treatment.

As well as a general duty to protect customer interests, we also have a specific duty, in deciding trade effluent appeals, to have regard to the desirability of a sewerage company recovering costs incurred, including a reasonable return on capital. Therefore:

- We must be satisfied that a new or amended condition is justified. The conditions imposed by the sewerage company should be related to the discharge conditions imposed on it by the Environment Agency, to meet environmental obligations in respect of sewage treatment works and storm overflows. If not, there must be a good explanation.
- We will need to establish and then compare the long-term cost implications, for the discharger and sewerage company respectively, of treating the effluent at minimum cost to meet environmental obligations. The estimates will have to take account of all of the consequences of the new or revised requirements, especially changes in necessary processes. Evidence will also be required about sensible timetables for the achievement of these changes.

## 4. Jurisdiction to determine the complaint

- 4.1 The section 124(5) of the Act notice of a direction, varying the conditions of consent to discharge trade effluent into Wessex Water's public sewers was issued on the 20 November 2019. The implementation date was 20 January 2020, in accordance with section 124(6) of the Act. The appeal was lodged with Ofwat on the 16 January 2020.
- 4.2 The Complainant is the owner of a butchery operation, which is a trade premises. The premises discharges' fall under the definition of trade effluent under section 141 of the Act.
- 4.3 As the appeal was received by Ofwat on 16 January 2020, this has been made in time as it is within two months from the notice made under section 124(5) of the Act. Finally, the passage of time since the section 124(5) notice is not significant. There is a live, unresolved dispute between the parties, and the parties have demonstrated the efforts they have made to try and resolve the dispute themselves.
- 4.4 We therefore have powers under section 126 of the Act to make a determination in this appeal.
- 4.5 Our role is to determine:
- a. Whether Wessex Water's direction dated 20 November 2019 should be annulled and replaced with a new direction. This would set out what Cattistock Kennels is allowed to discharge to Wessex Water's sewer and under what conditions; or
  - b. If the appeal should be dismissed, which would mean that Wessex Water's direction dated 20 November 2019 would be allowed to become effective upon our disposal of the appeal.

## 5. Response from draft decision

- 5.1 On 16 December 2020, we issued a draft decision to the Complainant and Wessex Water to which neither party issued a response within the allotted timeframe.
- 5.2 However, the Complainant sent a response after this, questioning that we had not visited the Site when making our decision, and that Wessex Water had also declined face to face meetings to resolve the dispute. Further, the Complainant pointed out that the change in employees has led to work to the Site carried out in 2012 at the Complainant's expense has now been disregarded.
- 5.3 As set out in Chapter 6, there was sufficient data to come to a reasonable conclusion regarding the nature of the effluent and its impacts on the WRC without a site visit.
- 5.4 The Complainant has undertaken works to improve the discharge from the Site, but the testing data shows the effluent from the Site has exceeded limits from both the original and updated trade effluent consents since 2012. Therefore the improvements would not make any substantive difference to the impact of the variation of the trade effluent consent.
- 5.5 Taking into account the comments on our Draft Determination, the decision will remain unchanged, and is outlined in detail in chapter 6 of our decision.

## 6. Final determination

6.1 We set out our final decision in this chapter. It has been informed by the legal framework, as set out in Chapter 3, and the evidence provided to us by both parties.

**Table 1 – Comparison of 2007 and 2019 consents**

	pH	Volume (m <sup>3</sup> per day)	Discharge rate (l/s)	Suspended solids (mg/l)	COD (mg/l)	Ammonia (mg/l)	Chloride (mg/l)
2007 consent	6-11	2	1	400	1000	50	None set
2019 Consent	6-10	2	1	1000	10000	250	3000

### The grounds for the appeal

- 6.2 The Complainant disputes several elements of Schedule 3 of Wessex Water’s proposed variation.
- 6.3 The Complainant disputes the variation because the daily discharge it has been offered is 2 cubic metres (m<sup>3</sup>). As the Site’s daily average is 500 litres, the Complainant feels it would be fair to ask for some of the strengths offered to be multiplied by four and the ammoniacal nitrogen to be multiplied by three.
- 6.4 The Complainant feels it would be fair to ask for the strengths for suspended solids and Chemical Oxygen Demand, as laid out in the revised

trade effluent consent conditions, to be multiplied by four, for ammonia to be multiplied by three, so that the trade effluent consent reads:

- Suspended solids with a limit of 4000mg/l
- Chemical Oxygen Demand with a limit of 40,000mg/l
- Ammonia with a limit of 750mg/l

6.5 The Complainant considers that on-site sampling point should be after 'on-site treatment' rather than before. They also consider that post sampling, its discharge receives extra settlement (previously estimated by the Complainant to be 50% of solids and 20% Chemical Oxygen Demand) before discharge to the sewer.

6.6 The Complainant believes point 3 (maximum discharge per day) of Wessex Water's revised conditions appears purposeless. Wessex Water verbally confirmed that waste water from the Site is still delivered to its site in one 'slug', therefore, the Complainant states that there is little need for its inclusion until such a time that Wessex Water's facility is improved.

## **Wessex Water's response to the appeal**

6.7 Wessex Water refused to amend the volumes in its trade effluent consent conditions suggested by the Complainant, based on its 'Trade Effluent Discharge to Public Sewer Guide Maxima for Common Substances' and have set the maximum allowed for each measure.

6.8 Wessex Water states that it cannot increase capacities of the revised consent as requested by the Complainant. The WRC had a £2.7m upgrade scheme as part of its asset management programme which was completed in March 2020. This consisted of a new inlet with screening plant, ferric dosing and a third biological percolating filter.

6.9 This scheme was required to meet new environmental permit limits for total phosphorous as well as addressing future population growth in the catchment.

- 6.10 Although the new scheme will be able to provide additional treatment capacity, it will have little effect against the inhibitory nature of the discharges from the Site if discharge limits are not adhered to.
- 6.11 This can result in elevated concentrations of ammonia, suspended solids and Biochemical Oxygen Demand in the treated effluent which could compromise the WRC's environmental permit compliance, as well as having a detrimental impact on the River Frome and its ecosystem.
- 6.12 The sample point in the consent is used as this enables Wessex Water to collect samples of the trade effluent being discharged. Wessex Water states that taking samples of the effluent downstream of the holding tank would include domestic waste as well as trade effluent which would prevent Wessex Water being able to monitor the trade effluent discharge accurately.

## Ofwat's Role

- 6.13 In order to assess the proposed consent, we needed to ensure that:
- Any new or amended condition is justified;
  - The conditions imposed by Wessex Water relate to the discharge conditions imposed on it by the Environment Agency. This is to ensure Wessex Water meets its environmental obligations in respect of sewage treatment works and storm overflows. If not, there must be a good explanation; and
  - We establish and then compare the long-term cost implications, for the Site and Wessex Water respectively, of treating the effluent at minimum cost to meet environmental obligations.
- 6.14 To do this we needed to know:
- Is there is a technical need for the variation?
  - What is the nature and volume of trade effluent produced by the Site?
  - How much effluent can Wessex Water's WRC accept and at what frequency?
  - What is the appropriate volume and nature of discharge of trade effluent?

- Are any additional conditions in respect of monitoring and notification of discharge required?
- Are there technical grounds for raising the suspended solids, COD and ammonia limits proportionally with a reduction in the total volumetric limit, which would not cause Wessex Water problems at its WRC or to Wessex Water's consent? If so, what would that limit be?
- Are there reasonable alternative options to those suggested by Wessex Water which the Complainant could consider implementing? If so what are these options.
- Is the Complainant's concern about the sampling point fair and reasonable, and sampling at a later point justifiable, or is Wessex Water's sample point correct?

6.15 In order to answer these questions, we commissioned technical assistance from a third party specialist, Hydro-Logic Services (“**Hydro-Logic**”) to consider these questions.

6.16 To complete this report, Hydro-Logic had access to laboratory measurements of the composition of trade effluent from the Site data about the composition of the treated effluent leaving the WRC, data about the volume of effluent received at the WRC; and data about the composition of crude and settled sewage at the WRC, which was then combined with assumptions based on prior research and available data to reach its conclusions

6.17 The report was provided to both parties with the Draft Determination, but the summary of the answers to Ofwat's questions, and our position as a result of the report we have commissioned, are set out below.

### **Is there a technical need for the variation?**

6.18 Yes. The effluent produced by the Site poses a real risk of inhibiting the biomass at the WRC, particularly via the concentration of chlorides that are likely to be discharged.

### **What is the nature and volume of the trade effluent produced by The Site?**

6.19 The volume is understood to be potentially variable and the Complainant reports they discharge on average 500 litres per day. However, it is understood that the discharge does not occur every day. The volume of the

effluent is around 0.1% of the 2019 average volume entering the WRC. However, the load of contamination can, in some circumstances, exceed 40% of the load received by the WRC. Comparison with typical domestic sewage data shows the trade effluent is much more concentrated.

## **How much effluent can Wessex Water's WRC accept and at what frequency?**

6.20 The exact organic loading rate<sup>3</sup> of the WRC is not known, although a Wessex Water document reports the works capacity lies in the range of 30 kg/d biological oxygen demand (“**BOD**”)<sup>4</sup> to 120 kg/d. An estimated BOD load suggests the WRC typically receives around 80 kg/d or about two-thirds of the notional upper limit. Without more information about the capacity of the WRC. However, the headroom it might have to accept this effluent cannot be assessed. However, it is concluded that the new trade effluent limits proposed by Wessex Water are appropriate, including the volume. Analysis of the duration of trade effluent discharges show they should occur over a period of at least five hours, ideally longer.

6.21 As the volume is variable, it can at times form a significant proportion of the load to the WRC, as it is released in one ‘slug’ of effluent; this can severely inhibit the operation of the WRC.

6.22 In light of the above, we are satisfied that the volumetric provisions in the updated trade effluent consent (20 November 2019) are justified to address the issues this could cause.

6.23 Furthermore, we consider that these provisions can be satisfied by the Complainant releasing the effluent from the settlement tank in smaller loads over a longer period of time.

## **What is the appropriate volume and nature of discharge of trade effluent?**

6.24 The effluent should be discharged at the new limits and volume proposed by Wessex Water. The higher limits requested by the Complainant

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<sup>3</sup> Organic loading rate is a measure of the quantity of effluent entering the works per unit of time, in this instance, kilograms per day.

<sup>4</sup> Biological Oxygen Demand is the amount of oxygen consumed by bacteria and other microorganisms while they decompose organic matter under aerobic (oxygen is present) conditions.

significantly increase the risk of adversely affecting the performance of the WRC.

### **Are there any additional conditions in respect of monitoring & notification of discharge required?**

6.25 Yes. The Complainant should, if they do not already, record the volume and timings of discharges and should consider periodic laboratory analyses in addition to the Wessex Water samples. This data should be shared with Wessex Water.

### **Are there technical grounds for raising the chloride, suspended solids, COD, chloride and ammonia limits proportionally with a reduction in the total volumetric limit, which would not cause Wessex Water problems at its WRC or to Wessex Water's consent? If so, what would that limit be?**

#### **The PH**

6.26 Many trade effluent consents specify that the pH of the effluent must lie in the range of 6 to 10 (or something similar such as 6 to 11 or 5.5 to 9). Table one shows the trade effluent pH is generally between 6.3 and 8.8. We consider that this is reasonable and unlikely to cause serious problems at the WRC because of mixing and dilution in the sewer network.

#### **COD**

6.27 Wessex Water adopt a COD of 802 mg/l<sup>12</sup> for sewage in their region, and the COD from the Site is at least 2.4 times this value and as high as 34 times the standard strength. The percentiles and average imply that the COD leaving the Site will typically be around eight times higher than that of the domestic sewage entering the WRC.

6.28 It was raised in the appeal that settlement may improve the testing results for the effluent. A settled COD analysis requires a sample of effluent to be allowed to settle for 30 minutes. Liquid is then extracted from above any layers of solids that have settled. A COD test is then carried out on that liquid. The resultant COD represents the oxygen demand exerted by dissolved organic matter and any colloidal solids or particulates which did not settle during the test.

6.29 The results for the Site show the settled COD and total COD values are very close to each other. This demonstrates that settlement removes little COD in these samples, further implying that the bulk of the COD in these samples is derived from dissolved and not particulate matter. Analysis of the ratio of settled COD to total COD, finds the mean ratio is 0.946, suggesting that almost 95% of the COD appears to be from dissolved or colloidal sources. The minimum ratio is 0.86, implying that no more than 14% of the COD in these samples is particulate in origin.

## Suspended solids

6.30 Testing data from effluent taken from the Site from 2017 to 2019 suggests the effluent has an average solids content that is typically between approximately 2 to 2.5 times that of untreated domestic wastewater.

6.31 The nature of the solids produced by the Site is not certain, though is likely comparable to prior studies of butchery effluent, so no definitive comment can be made about their likely impact at the WRC. The mass and concentration of solids appears to be moderate and of a level that many sewage works can accept. If these solids do not settle well, however, then they can be carried over from settlement tanks into downstream biological processes and can ultimately appear in the treated wastewater leaving the sewage works. Solids that have a significant organic content can begin to break down in settlement tanks and this can increase BOD and release odours.

## Ammonia

6.32 This concentration is high compared to domestic sewage, which can be expected to have a concentration of around 40 mg/l. If the WRC is capable of nitrifying (i.e. processing ammonia) then an excessive load of ammonia entering the works can disturb the population of nitrifying bacteria.

6.33 Nitrification consumes alkalinity in the sewage and can reduce the pH if alkalinity is not replenished by dosing with, for example, sodium carbonate. Nitrifying bacteria work well around a pH of 7 and lower pH values will cause nitrification to slow and then cease altogether. This in turn will cause the ammonia in the treated effluent to increase and potentially breach the Site's consent.

## Sulphates

- 6.34 The concentrations measured in the Site's effluent are around three to four times what would be expected in domestic raw sewage.
- 6.35 Sulphates can be converted to sulphides in anaerobic conditions and this can form hydrogen sulphide gas which can accumulate in the free space above sewage in a partially full sewer. Subsequent reactions convert the sulphide into weak sulphuric acid which can attack concrete structures and cause significant damage. This is one of the main reasons why water companies monitor the concentrations of sulphates discharged to sewers from trade premises. Other problems that can arise include odour complaints and inhibition of biomass if the sulphide concentration is sufficiently high. There is clearly strong rationale for monitoring sulphate levels.

## Chlorides

- 6.36 These occur naturally in water (and hence sewage) but not at the concentrations seen in the trade effluent data from the Site. The mean concentration in the Site's trade effluent is almost exactly 100 times what would be expected in untreated domestic wastewater. This indicates another source of chlorides.
- 6.37 The exact nature of the operations at the Site is not known but activities such as salting or brining meat or discharging water softeners waste will greatly increase the amount of chloride in the effluent from such facilities. Chlorides can inhibit a biomass and prevent a sewage works from meeting its discharge consent. The concentrations seen in the Site's data are very high and could adversely affect the WRC, particularly if the effluent arrives quickly as a single slug.
- 6.38 In conclusion, the increases to the accepted content of a smaller volume of effluent would produce an effluent with an even higher concentration. This would greatly increase the risk of impairing the performance of the WRC. Such a concentrated effluent would have to be discharged very slowly and ideally over a period of 24 hours or more, which would be possible by improving the means of discharge at the Site.

6.39 Therefore, we find that there is no technical rationale for the Complainant's suggested amendments to the trade effluent consent (20 November 2019) regarding the content of the effluent.

**Are there reasonable alternative options to those suggested by Wessex Water which the Complainant could consider implementing? If so, what are these options?**

6.40 Yes and these were listed in the report, which has been provided to both parties. On-site effluent treatment at the Site is not likely to be cost-effective but there are a range of low-cost measures that could be implemented which will control the volume and composition of the effluent.

**Is the Complainant's concern about the sampling point fair and reasonable, and sampling at a later point justifiable, or is Wessex Water's sample point correct?**

6.41 Trade effluent samples should be taken at a point upstream of where domestic sewage enters the system. It is not appropriate or correct to sample where trade effluent and domestic sewage have been mixed.

6.42 The Complainant has suggested that it might be the case that the domestic wastewater only mixes with the trade effluent at some point downstream of a settlement tank. If this situation is true then it implies the material in the settling tank contains only trade effluent and it further implies that domestic sewage and the effluent are mixed sufficiently far downstream of the tank to enable the discharge from the tank to be sampled in such a way that sewage will be excluded from the sample. In that case, it would be acceptable for samples to be taken downstream of the settling tank if it can be guaranteed that only trade effluent enters and leaves the tank and the sampling point downstream is before the domestic sewage mixes.

6.43 However, the location of the testing will make a very small effect on COD as the bulk of this is soluble. Settlement will reduce the solids content of the effluent but the size of the reduction will depend on the nature and dimensions of the solids. A figure of 50% is quoted widely in literature about settlement but it is wiser to assume the true removal will lie in the range of 30% to 60%.

- 6.44 Therefore, if the holding tank discharge comprises only trade effluent and if domestic sewage enters sufficiently far downstream for samples to be taken that contain only trade effluent then sampling after settlement but before mixing with the domestic wastewater is acceptable. However, if the discharge from the holding tank contains trade effluent and domestic sewage then Wessex Water's decision about the sample point is correct.
- 6.45 While we cannot make a determination as to where the samples should be taken from, provided they contain the effluent to be accepted by the WRC, we would encourage Wessex Water to further investigate the possibility of sampling after settlement, and to inform the Complainant, and Ofwat of the outcome of its investigation.

## Conclusion

- 6.46 The proposed variation of the trade effluent consent eases or maintains most of the requirements on the Complainant.
- 6.47 In the two instances (pH and the introduction of limits on chlorides) both Wessex Water's response, and the Hydro-Logic study into the impact these have on waste water treatment demonstrate that these are necessary.
- 6.48 Having reviewed the Complainant's concerns about the variation to the trade effluent consent, the changes appear to be justifiable, and in some cases essential to the safe operation of the WRC and to prevent damage to the surrounding environment.
- 6.49 In light of the legal framework of the Act, and the evidence we have gathered from the parties to the dispute, we determine that Wessex Water's variation to its trade effluent consent with the Complainant, dated 20 November 2019, should stand, and should come into effect from the date of our final decision being issued.

## **A1 Hydro-Logic report**

This was provided to both parties as an attachment to the Draft Determination.

**Ofwat (The Water Services Regulation Authority)  
is a non-ministerial government department.  
We regulate the water sector in England and Wales.**

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