Competition Act 1998

Decision of the Director General of Water Services
No. CA98/01/2005

Investigation into charges for the treatment of tankered landfill leachate by United Utilities Plc following a complaint made by Quantum Waste Management Ltd.

20 May 2005
(Case CA98/01/32)

SUMMARY

The Director General of Water Services (the Director) received a complaint under the Competition Act 1998 from Quantum Waste Management Limited (QWM) on 17 December 2001. QWM is a brokerage company that collects and disposes of landfill leachate at waste water treatment works and other sites. United Utilities Water Plc, a division of United Utilities Plc (United Utilities), is a statutory water undertaker under the Water Industry Act 1991.

The complaint concerned Bioprocessing (an arm of United Utilities), which receives tankered waste on behalf of United Utilities at its waste water treatment works. QWM alleged that United Utilities was abusing a dominant position in the market for the treatment of tankered landfill leachate: through the prices it charges customers and itself; by targeting certain customers to exclude competitors from the market; and by denying third parties direct access to its waste water treatment works.

In autumn 2001, United Utilities approached QWM’s largest customer and successfully offered to take over the transport as well as the on-going treatment of that customer’s waste. QWM lost the haulage work for the three sites in question between January and March 2002.
The Director opened his investigation into the complaint on 18 January 2002. At the Director's initiative the investigation went beyond the scope of QWM's complaint and included consideration of excessive pricing and discriminatory pricing. The Director's analysis shows that United Utilities is likely to have held a dominant position in this market at the time material to the complaint. However, United Utilities faces significant competitive constraints, which to some extent limit its market power. This is due to the nature of the market and the ability of customers to leave the market by building onsite leachate treatment plants.

After a thorough investigation the Director found there were insufficient grounds for him to issue a rule 4 statement of objections on any of the complaints raised by QWM. The Director also found that there were no grounds for such action on any of the other issues he considered on his own initiative.
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ANNEX FOUR – PRICING ANALYSIS (DISCRIMINATORY PRICING).

ANNEX FIVE – A MAP OF UU’S APPOINTED AREA\(^2\)

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\(^1\) The structure represents the relevant part of UU at the time material to the complaint.

\(^2\) The maps are for the water and sewerage supply area of North West Water Plc, the area has not changed since North West Water Plc became United Utilities Water Plc.
INTRODUCTION

1. This decision relates to a complaint made by Quantum Waste Management Limited against conduct by companies forming part of the United Utilities Plc group. The complaint is fully described below, but in very broad summary it was that the United Utilities companies have engaged in abusive behaviour in the market, in which United Utilities is said to be dominant, for the treatment of landfill leachate in water treatment works in the North West of England and North Wales. Landfill leachate is, in essence, liquid that has percolated through landfill sites. It often contains dangerous residues, and by law has to be treated in various ways, including in wastewater treatment works, before it can be released into the environment. When treated in wastewater treatment works located off the landfill site, and unless it can be carried through the sewerage system, the leachate has to be transported in tankers (or “tankered”) to the wastewater treatment works.

2. The Director has decided to close the file on this complaint, on the basis that there are insufficient grounds on the evidence before him to proceed further with the matter, and in particular insufficient grounds to issue a statement of objections under rule 4 of the OFT’s Rules.

BACKGROUND

LEGAL BACKGROUND

Competition Act 1998

3. Under the Competition Act 1998 (“the Act”), the Director has, with three exceptions, all the powers of the Office of Fair Trading (“OFT”) to apply and enforce the provisions of Part 1 of the Act so far as relating to “commercial activities connected with the supply of water or securing a supply of water or with the provision or securing of sewerage services” in England and Wales.

4. Section 18(1) of the Act provides that any conduct on the part of one or more undertakings which amounts to the abuse of a dominant position in a market is prohibited if it may affect trade within the United Kingdom (“UK”).

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3 See paragraphs 38 – 45 below for a detailed description.
4 The exceptions are that only the OFT may issue guidance on penalties and commitments and make and amend the OFT’s procedural rules.
5 Section 31(3) of the Water Industry Act 1991, as inserted by Schedule 10, paragraphs 5(5) and 5(6) of the Act.
6 Section 18(1) of the Act is subject to section 19 of the Act which provides that the Chapter II Prohibition does not apply to certain defined cases. Under section 18(3) of the Act, ‘dominant position’ means a dominant position within the UK, or any part of it, and 'UK' means the UK or any part of it.
5. The Director is satisfied that UU is an undertaking; indeed, that proposition has never been in dispute.

6. In order to establish that an undertaking has infringed the Chapter II prohibition, the Director must show that:
   - the undertaking holds a dominant position in a relevant market;
   - the undertaking has abused that dominant position; and
   - that the abuse may affect trade within the United Kingdom or any part of it.

7. Section 18(2) of the Act provides that conduct may, in particular, constitute an abuse if it consists in:
   
   (a) directly or indirectly imposing unfair purchase or selling prices or other unfair trading conditions;
   
   (b) limiting production, markets or technical development to the prejudice of consumers;
   
   (c) applying dissimilar conditions to equivalent transactions with other trading parties, thereby placing them at a competitive disadvantage;
   
   (d) making the conclusion of contracts subject to acceptance by the other parties of supplementary obligations which, by their nature or according to commercial usage, have no connection with the subject of the contracts.

   This list is illustrative only and not exhaustive. The European Court of Justice ("ECJ") has held that:

   "The concept of abuse is an objective concept relating to the behaviour of an undertaking in a dominant position which is such as to influence the structure of a market where, as a result of the very presence of the undertaking in question, the degree of competition is weakened and which, through recourse to methods different from those which condition normal competition [...] has the effect of hindering the maintenance of the degree of competition still existing in the market or the growth of that competition."  

8. The Chapter II Prohibition came into force on 1 March 2000. It does not have retrospective effect. It therefore applies to abusive conduct which one or more dominant undertakings engage in as from 1 March 2000.

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7 Case 85/76 Hoffman-La Roche & Co. AG v Commission, [1979] 3 CMLR 211, paragraph 91.
Further details of the Chapter II Prohibition can be found in the OFT Guideline, “Abuse of a Dominant Position” (OFT 402, December 2004)\(^9\).

9. Section 60(1) of the Act sets out the principle that, so far as is possible (having regard to any relevant differences between the provisions concerned), questions arising under Part 1 of the Act in relation to competition within the United Kingdom should be dealt with in a manner which is consistent with the treatment of corresponding questions arising in European Community law in relation to competition within the Community. In particular, under section 60(2) of the Act, when determining a question under Part 1 of the Act the Director must act (so far as is compatible with the provisions of Part 1 of the Act) with a view to securing that there is no inconsistency between the principles applied, and the decision reached, by him in determining that question, and the principles laid down by the Treaty\(^10\) and the European Court\(^11\), and any relevant decision of the European Court. Under section 60(3) of the Act, the Director must also have regard to any relevant decision or statement of the European Commission\(^12\).

**Standard of Proof under the Competition Act 1998**

10. In considering the standard of proof required to establish the infringement outlined in this decision, the Director has taken full account of the recent ruling by the Competition Appeal Tribunal (the Tribunal) in the *Replica Kit* appeals, [2004] CAT 17, paragraphs 187-208. In particular, at paragraph 204 of the judgment, the Tribunal comments as follows:

“It also follows that the reference by the Tribunal to 'strong and compelling' evidence at [109] of Napp should not be interpreted as meaning that something akin to the criminal standard is applicable to these proceedings. The standard remains the civil standard. The evidence must however be sufficient to convince the Tribunal in the circumstances of the particular case, and to overcome the presumption of innocence to which the undertaking concerned is entitled.”

11. Although made in the context of Chapter I cartel cases, the Director has also taken account of the remarks by the Tribunal in *Claymore Dairies v. OFT* [2003] CAT 18, [2004] CompAR 177, to the effect that the question

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\(^9\) Although the guidelines on the application of the Act were produced by OFT, the regulators with concurrent powers under the Act, were involved in the drafting of the guidelines.

\(^10\) The Treaty is defined as the Treaty establishing the European Community (Section 59(1) of the Act).

\(^11\) The European Court is defined as the Court of Justice of the European Communities and includes the Court of First Instance (section 59(1) of the Act).

\(^12\) Further details of section 60 of the Act can be found in the OFT Guideline, “Modernisation” (OFT 422, December 2004).
that the OFT (or in this case, the Director) has to ask before issuing a statement of objections under what is now rule 4 of the OFT’s Rules is “Am I satisfied that the evidence, if uncontested, is sufficient to establish an infringement?” However, in posing that question, the Director considers that he must bear in mind the presumption of innocence, so that where the evidence before him is reasonably capable of an explanation not involving abuse, and where that explanation is not clearly less likely than an explanation which involves abuse, that evidence will not be sufficient to establish abuse.

The Parties

United Utilities Plc (“UU”)¹³

12. North West Water Plc, which owned North West Water Ltd, acquired the electricity provider NORWEB Plc on 8 November 1995. North West Water Group Plc was renamed United Utilities Plc on 1 January 1996, and became the holding company of North West Water Ltd. [A diagram illustrating UU’s company structure is attached at Annex one]. North West Water Ltd and NORWEB Plc were later renamed United Utilities Water Plc and United Utilities Electricity Plc, respectively. United Utilities Plc is the holding company of United Utilities Water Plc.

United Utilities Water Plc (“UUW”)

13. UUW provides water and sewerage services to customers in the North West of England. [A map showing its Water Supply Area is contained in Annex five]. It has approximately 2.74 million household water customers and 204,000 non-household water customers. It also has 2.72 million household sewerage customers and 174,000 non-household sewerage customers. It provides water services over an area of 14,415km² and sewerage services over an area of 14,445km².

United Utilities Industrial Ltd (“UUI”)

14. UUI is part of UU’s Contract Solutions Division. UUI is responsible for non-regulated¹⁴ asset management and non-regulated waste management functions of UU. The activities that used to be carried out by Bioprocessing are now undertaken within the broader UUI business.

Bioprocessing

¹³ All references to UU in this decision should be taken to include all divisions of UU, including UUW and UUI as set out in paragraphs 13 and 14.
¹⁴ That is to say, activities that are not subject to regulation under the terms of an appointment as a water and sewerage undertaker under the Water Industry Act 1991.
15. Bioprocessing was established as a business within North West Water Ltd before the formation of UU. In October 2001, Bioprocessing was transferred from UUW to UUI, although the transfer was not effective until April 2002. Bioprocessing handles all incoming tankers at nine of UUW’s wastewater treatment works (WWTW). UU has 618 WWTWs in the North West of England. 172 of these sites have extant trade effluent consents and 46 have extant consents for landfill leachate to drain into them. However, only nine WWTWs in the area are able to receive landfill leachate by tanker and ensure that the tankered waste is correctly introduced to the WWTW. Bioprocessing carries out sampling and laboratory analysis; training; waste management licence supervision and provides other technical advice. Bioprocessing pays UUW a fee to treat the waste it introduces and bills its customers on behalf of UUI. Bioprocessing markets itself as a provider of a complete ‘waste handling’ service which deals specifically with the treatment of tankered industrial and commercial waste (mainly liquid).

Unifleet

16. Unifleet is UU’s transportation business. Bioprocessing uses a mixture of Unifleet tankers and other contractors’ tankers for the transport of tankered waste to UUW’s WWTW for treatment. Launched in November 1996, Unifleet brought together North West Water and Norweb transport to become the major transport provider to United Utilities. At the relevant time Unifleet managed a major internal (to UU) fleet of 3,600 commercial vehicles, ranging from car-derived vans to heavy articulated tankers. It also maintained 1,000 vehicles on external contracts.

Quantum Waste Management Ltd. (“QWM”)

17. QWM is a brokerage firm established in November 1999. QWM provides tankering services to industrial waste producers including landfill sites and in addition also arranges contracts with the receiving WWTW or Independent treatment works (“ITW”) and provides management services on behalf of landfill sites to ensure that the landfill site receives a competitive price for the treatment and disposal of landfill leachate. In the period 1999-2003 it provided transport and disposal services for landfill leachate. QWM stated that “Quantum Waste Management is currently

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15 North West Water became a public limited company in 2000.
16 That is to say, it carried on business in negotiating, inter alia, contracts on behalf of landfill sites for the tankerage and disposal of landfill leachate; QWM used NDS (see paragraph 18) for tankering, and would arrange the treatment of the waste on behalf of its landfill owner principal with (so far as is material) UU.
17 In this decision, “ITW” is used to refer to a treatment works operated by persons other than the appointed sewerage undertaker for the area in question; “WWTW” (waste water treatment works) is used to refer to works that are operated by the relevant appointed sewerage undertaker.
18 Fax to Ofwat dated 29 September 2003.
not trading but the two directors […] are going to keep the Company a legal entity until the outcome of [Ofwat’s] investigation into United Utilities.”

Northern Disposal Services (“NDS”)

18. NDS is a tankering company owned and operated by one of QWM’s directors. QWM used NDS tankers to provide the tankering element of its business. NDS currently still operates in the market for tankered waste.

The complaint

19. In a letter dated 17 December 2001 QWM asked Ofwat to consider whether UUW was in breach of the Act, in what it believed was a “serious attempt [by UUW] to monopolise a geographical market”.

20. QWM alleged that:

   a) UU’s purchase of Welsh Water’s waste management business, Hyder Industrial Limited (Hyder), had given “the combined business a virtual monopoly on biological treatment capacity of landfill leachate in the North West.” Since the purchase of Hyder, Bioprocessing had made an unsolicited approach to QWM’s largest customer, Waste Recycling Group Plc (“WRG”), and offered it a discounted price to treat landfill leachate from a number of WRG landfill sites.

   b) The charge made by UUW to Bioprocessing for the use of its treatment works for tankered landfill leachate meant that UU was subsidising Bioprocessing. QWM alleged that this was an abuse of a dominant position.

21. In a further letter to Ofwat QWM provided information and evidence to support its complaint. QWM agreed with the following grounds for complaint which Ofwat had set out in a letter dated 21 December 2001 as its understanding of what QWM was alleging.

   c) UU was charging QWM more for treatment of tankered landfill leachate at its WWTWs than it would charge trade effluent customers based on the Mogden formula (defined in annex three).

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19 Letter to Ofwat dated 17 December 2001, paragraph 1.
21 Defined as “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 in relation to any trade premises, means any such liquid which is so produced in trade or industry carried on at those premises”. Part IV, Chapter III, section 141 of the Water Industry Act 1991.
22 Discussed in more detail at paragraph 176a.
d) Bioprocessing was being offered lower charges for treatment of tankered landfill leachate than QWM by UU’s Asset Operations division. This had allowed UU to take QWM’s customer, WRG, and QWM would have liked to obtain a right to use the same facilities at an equivalent price.  

The price charged by UU to Bioprocessing and other customers for the treatment of landfill leachate

22. Regarding the allegations set out at points b) and d) above QWM stated that UU charged Bioprocessing an operating expenditure (“opex”) version of the Mogden formula, that did not recover capital costs, for the use of its sewerage treatment facilities. It claimed that this was half the amount Bioprocessing would have paid if the charge had been based on the full Mogden formula. In QWM’s view this method of charging Bioprocessing amounted to an abuse of a dominant position and it wanted the “right to use the same facilities at an equivalent charge.”

23. In QWM’s view the basis of the charges for the reception, treatment and disposal of tankered waste should have been “Mogden formula + Handling cost + Overhead + a reasonable Profit Margin.” QWM claimed that this was not the case and it wanted direct access to UUW’s WWTW on “a level playing field basis and be able to challenge for business without being disadvantaged.”

24. QWM provided figures from Bioprocessing management accounts for the period April 2000 to May 2001 showing a sales figure of £[…] and operating profits of £[…]. QWM could not see how Bioprocessing could earn such a return if UU levied Bioprocessing with the same charges as Quantum.

Exclusionary action by UU to capture QWM’s business

25. Regarding the allegations set out at point a) above QWM said that it believed that Bioprocessing made a strategic decision to capture QWM’s business at the WRG sites following UU’s acquisition of Hyder. QWM pointed out that QWM had, in areas covered by UU and Hyder, previously used alternative treatment plants not owned by UU or Hyder, but observed that in all cases, an ITW has a limited processing capacity due to volume

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23 Letter from Ofwat dated 21 December 2001 from Case Manager Prashant Vase.
24 Defined in Annex 3 and paragraph 176a.
29 […] indicates information excised on the grounds of confidentiality.
and content constraints imposed by the ITW’s Waste Management Licence ("WML").

26. QWM said that the loss of business from the WRG sites to Bioprocessing "would have a significant effect on Quantum’s business."³⁰

**Ofwat Investigation**


28. On 28 January 2002, Ofwat sent UU a section 26 notice requiring the provision of information on UU's accounts, charging schedules and customer billing information. UU's response on 4 February 2002 provided Bioprocessing’s management accounts, customer billing information and details of Bioprocessing’s charging schedule for the treatment of tankered waste. A second response on 13 February 2002 provided information about the WRG business and correspondence between Bioprocessing and WRG.

29. On 22 February 2002, Ofwat met with representatives of UU and its solicitors to clarify the section 26 response and, in particular, Bioprocessing’s operating profit levels. At that meeting, UU said that it did not calculate prices for treatment of landfill leachate using component costs, instead it offered a market price for tankered landfill leachate, but might price differently for other waste management services.

30. On 1 March 2002 QWM told Ofwat that it did not believe that UU was cross subsidising its business with the UU owned Unifleet transport business. QWM asked if there was anything that Ofwat could do to stop QWM losing the WRG business and insisted that it be offered the same internal rate³¹ as Bioprocessing so that it could compete on an equal basis. In reply Ofwat asked how a reduction in UU’s charges for access to its WWTW would assist QWM and for clarification of its figures.

31. At a meeting with QWM on 15 March 2002, Ofwat discussed the possibility of making interim measures directions with QWM, to stop Bioprocessing taking the WRG business. No application for interim measures was made by QWM, but a number of options were discussed as possible remedies to prevent QWM losing the business. There was no evidence that interim measures would change the situation and therefore Ofwat did not consider the issue in detail. Initial indications showed that QWM’s ability to retain the WRG business would not be strengthened by a price reduction brought

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³¹ UU makes an internal charge to Bioprocessing based on the Mogden formula.
about following interim measures, therefore Ofwat continued with its investigation.

32. On 30 May 2002, Ofwat wrote to UU\textsuperscript{32} to clarify the issue of direct access to UU's WWTW. UU replied\textsuperscript{33} that in principle it would grant direct access if the third party had the necessary knowledge and skills. Ofwat subsequently asked\textsuperscript{34} UU what criteria QWM would need to fulfil to gain access. UU responded\textsuperscript{35} repeating the importance of technical skills (for example in relation to treatability testing, sampling and interpretation of results) but stating that in any event it did not believe that it was under an obligation to allow direct access unless "a particular WWTW was an essential facility".

33. At a meeting on 29 August 2002, QWM and Ofwat discussed QWM's concerns in detail.

34. As part of its investigation into the relevant market Ofwat sent section 26 notices\textsuperscript{36} to Severn Trent Water Ltd. (“SVT”), Yorkshire Water Services Ltd. (“YKS”) and Northumbrian Water Ltd. (“NNE”).

35. On 19 December 2002 Ofwat sent a second section 26 notice\textsuperscript{37} to UU, requiring the provision of information about its prices and profits, Bioprocessing’s position within UU and information about landfill leachate and trade effluent treatment at UU’s WWTW. UU’s replies\textsuperscript{38} included a market definition paper by Oxera\textsuperscript{39}; internal management accounts for Bioprocessing; and details of Bioprocessing’s tankered waste customers.

36. Ofwat issued a section 26 notice\textsuperscript{40} to ten potential competitors of Bioprocessing operating ITWs in the North West. The notice requested details of company accounts; charging schedules; landfill leachate customers; details of the relevant product and geographical market; and information regarding the environmental regulatory regime. The responses showed that, of the undertakings contacted, seven had treated third party landfill leachate in the previous five years.

\textsuperscript{32} In a letter dated 30 May 2002.
\textsuperscript{33} In a letter dated 21 June 2002.
\textsuperscript{34} In a letter dated 19 August 2002.
\textsuperscript{35} In a letter dated 25 September 2002.
\textsuperscript{36} Dated 11 November 2002.
\textsuperscript{37} Dated 19 December 2002.
\textsuperscript{38} In letters to Ofwat dated 24 January 2003, 30 January 2003, 14 February 2003 and 6 March 2003.
\textsuperscript{39} An economic consultancy.
\textsuperscript{40} Dated 2 July 2003.
37. On 1 September 2004 Ofwat issued a third section 26 notice to UU seeking confirmation of its pricing structure for the treatment of tankered landfill leachate. UU replied on 6 October and 27 November 2004 explaining the negotiation process it entered into with customers to reach a price for the treatment of landfill leachate. UU also provided information in an email dated 1 November 2004 showing that it had lost several customers due to their building onsite leachate treatment works.

LEGAL AND ECONOMIC ASSESSMENT

RELEVANT MARKET

Introduction

38. The European Commission’s Notice on the definition of the relevant market for the purposes of European Community competition law states that a relevant product market comprises “all those products and/or services which are regarded as interchangeable or substitutable by the consumer, by reason of the products’ characteristics, their prices and their intended use”.

39. It further states that the relevant geographic market comprises “the area in which the undertakings concerned are involved in the supply and demand of products or services, in which the conditions of competition are sufficiently homogeneous and which can be distinguished from neighbouring areas because the conditions of competition are appreciably different in those areas”.

40. The Notice also describes the sorts of information that may be used to define markets. These include product characteristics, evidence of past substitution, differences in prices and trends, and the views of customers and competitors. Supply-side substitution may also be relevant to a definition of the relevant market where its effects are equivalent to those of demand-side substitution in terms of effectiveness and immediacy.

THE PRODUCT MARKET

Landfill leachate

41. The Director considers that the treatment of tankered landfill leachate is the relevant product market in this case.

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41 Dated 1 September 2004.
42. The Landfill (England and Wales) Regulations 2002\(^{44}\) ("the 2002 Regulations") define a landfill as:

   "s.3(3)(a) …any site which is used for more than a year for the temporary storage of waste; and

   (b) Any internal waste disposal site, that is to say a site where a producer of waste is carrying out its own waste disposal at the place of production."

43. Landfill leachate is defined in the 2002 Regulations as "any liquid percolating through deposited waste and emitted from or contained within a landfill."

44. Landfill leachate is a liquid usually containing suspended solids, insoluble liquids (e.g. oils), chemical and biological products that are released into solution during waste decomposition and products from the degradation of waste by micro-organisms\(^{45}\). It originates from rain percolating through the waste matrix\(^{46}\), and is generated by the decomposition of the waste mass in a landfill site.

45. Landfill leachate can contain toxic substances that could be harmful if discharged to controlled water\(^{47}\). Schedule 2(c) to the 2002 Regulations requires that before discharges into controlled waters "appropriate arrangements shall be made to […] collect contaminated water and leachate and treat it to the appropriate standard so that it can be discharged." In the period before the 2002 Regulations came into force, landsite owners were obliged by the Waste Management Licensing Regulations 1994\(^{48}\) to apply a general duty of care.

How landfill leachate differs from other types of waste

A. Variability of composition

46. Landfill leachate is distinct from other types of waste because of the highly variable nature of its composition.

\(^{44}\) SI 2002 1559 The 2002 Regulations implement (for England and Wales) the Landfill Directive 1999/31/EC.


\(^{46}\) The differing layers of waste in a landfill site.

\(^{47}\) Controlled waters include rivers, lakes, ponds, streams, canals, coastal waters, estuaries and groundwater. (Ground water is defined at footnote 73).

\(^{48}\) SI 1056 1994.
47. The Environment Agency has told Ofwat that “it is this variable nature that differentiates landfill leachate from other industrial effluents which are generally homogenous in nature.” The Environment Agency also told Ofwat that “Leachate from landfills […] is derived from a highly variable feedstock.” An example provided by the Environment Agency highlights the variability of leachate coming from a single landfill site:-

“The inputs into a particular landfill cell could be comprised of a significant proportion of contaminated soils from the remediation of a former gasworks site. The leachate may be characterised by higher polyaromatic hydrocarbons (tars) and lower biological oxygen demand (“BOD”)/ammonia due to the ratio of municipal to industrial waste. Once the remediation activity is complete the next landfill cell may be filled with mainly municipal and industrial wastes and would have low concentrations of polyaromatic hydrocarbons but high BOD/ammonia. Leachate composition/quality will also vary as it ages and with the biological degradation phases.”

48. The Environment Agency’s view that the high variability of leachate distinguishes it for present purposes from other types of (comparatively) homogeneous industrial effluent waste is supported by the views of ITWs at paragraph 86 below.

B. Regulatory regime

49. Landfill sites and leachate produced as a by-product of the landfill process are subject to a changing and increasingly strict regulatory regime. The relevant legislation includes the Landfill Directive and the 2002 Regulations, the Waste Management Licensing Regulations 199451 and the Pollution Prevention and Control (England and Wales) Regulations 200052.

50. Significantly, the 2002 Regulations refer to hazardous53 waste and define it by reference to the Hazardous Waste Directive (HWD)54. Regulation 7(1) provides that the Environment Agency will classify landfill sites as hazardous, non-hazardous or inert55. If a landfill site is classified as inert, the requirement to collect and treat leachate would not usually apply56.

49 Letter to Ofwat dated the 16 December 2002.
51 SI 1994/1056
52 SI 2000/1973
53 References to hazardous in this document refer to the definition under the Landfill Regulations 2002 and the conditioning plans submitted to the Environment Agency under those Regulations. Following classification changes by the Environment Agency these sites would now be more appropriately called co-disposal sites.
54 Regulation 7(2).
55 Regulation 7(1).
56 Schedule 2 paragraph 2 (2) of the Landfill Regulations 2002.
51. Environment Agency figures show that in 2001 45% of hazardous waste by volume produced in the UK was sent to landfill sites\(^{57}\). 9% of this hazardous landfilled waste was dealt with in the North West.

52. The Landfill Directive required the banning of landfill of hazardous liquid wastes as from 2002\(^ {58}\).

53. The owner of a landfill site has a responsibility under his landfill permit\(^ {59}\) to ensure that leachate is disposed of in a way that complies with applicable environmental law. As mentioned above, similar obligations applied before the 2002 Regulations came into force.

**The treatment of landfill leachate**

54. In the UK, landfill leachate can either (i) be discharged directly to sewer, watercourse or tidal waters following any necessary pre-treatment\(^ {60}\) at the landfill site (if the appropriate consents have been obtained), or (ii) tankered to a treatment works for treatment\(^ {61}\). However, in some circumstances, pre-treated landfill leachate may be tankered to an appropriate treatment works rather than discharged into the sewerage system or controlled waters, for example if a significantly higher than average volume of leachate is produced due to rainfall, or if the landfill is subject to enforcement by the Environment Agency due to unacceptable leachate levels.

55. Pre-treatment of landfill leachate is frequently necessary before it can be discharged to sewer (or controlled waters). The minimum pre-treatment that is usually required is treatment to remove methane in view of the explosion or asphyxiation risks that arise in relation to water containing significant quantities of methane; but further pre-treatment may also be necessary.

56. The Environment Agency website states that “leachate is a difficult liquid to treat and dispose of due to its variable nature. Landfill leachate changes in terms of strength, biodegradability, and toxicity as the wastes in the landfill age over time.”

**The treatment of landfill leachate at a leachate treatment plant (“LTP”)**

57. One option for the treatment of landfill leachate is for the landfill site to build an LTP to treat the leachate onsite to a standard at which it can be treated.

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\(^{58}\) The landfill of non-hazardous liquid waste will be banned in July 2005.

\(^{59}\) Granted pursuant to the 2002 Regulations.

\(^{60}\) “Pre-treatment” refers to processing to a standard whereby the product is suitable for the next stage in its treatment, whatever that may be.

\(^{61}\) “Treatment” refers to processing to a standard whereby the product is fit for discharge to controlled water.
disposed to sewer or watercourse. This is becoming a more frequent choice of landfill sites due to tightening regulatory constraints and the various cost benefits an LTP produces for the landfill site.

58. Building a new LTP is considered below in the section dealing with demand-side substitution. Existing LTPs could treat leachate from other landfill sites and therefore compete against ITW and/or WWTW, however whilst companies that own groups of landfill sites may share one LTP between sites, it is less common for LTP to accept leachate from other landfill sites that are not part of the same business group. It should be noted that in response to section 26 requests none of the ITW or WWTW mentioned LTPs as a competitor when asked.

The treatment of tankerized landfill leachate at an ITW

59. Leachate treated at an ITW usually undergoes different treatment from the treatment carried out at a WWTW that is operated by an appointed sewerage undertaker. This is because an ITW does not have the same type and scale of treatment equipment as a WWTW, and the treatment techniques used at ITWs are usually based on physical or chemical methods. Of the ITWs questioned as part of this investigation, two of seven are able to treat landfill leachate biologically. This is because biological treatment is expensive to operate on a small scale and there are more cost effective options available (eg. chemical treatment). Landfill leachate treatment experts consider that as the end result of those processes has to be further treated, chemical and physical treatment is “not a real treatment process compared to biological methods”. Therefore, even after treatment by an ITW, leachate frequently needs further treatment, commonly at a WWTW where biological methods are used.

60. Although chemical and physical treatment are not capable of producing effluent to a standard for final disposal to watercourse or tidal waters, sites offering these treatment methods may be considered substitutes on the relevant market. This is because the ITW concerned contracts to dispose of the waste on behalf of the landfill site, so that responsibility for final disposal passes to the ITW.

The treatment of tankerized landfill leachate at a WWTW

61. Most landfill leachate can be added directly to the sewage inlet at a WWTW for treatment along with sewage. However, some landfill leachate cannot be added to WWTW without pre-treatment or, in some cases, at all.

62 One of the ITWs used a WWTW operated by another undertaking outside the relevant area, but also has its own treatment facility inside the area.
For example, landfill leachate containing “red list” substances such as PCBs cannot usually be added to the sewage inlet of a WWTW, as in most cases the WWTW would not have a discharge consent that would allow it to accept waste containing PCBs. However, the ability of a WWTW to accept red list waste is dependent on that works’ capacity determined by the conditions of the relevant Waste Management Licence (“WML”) and so can only be determined on a case by case basis. Therefore many WWTWs and ITWs cannot accept waste containing red list substances as they cannot be treated to a sufficient standard to allow the works to meet its discharge consent, i.e. some traces of the waste will remain that may potentially contaminate the receiving waters. Under the relevant environmental legislation the discharge of red list substances is strictly controlled. There are other treatment options for red list substances (such as electrochemical oxidation) but these are not usually offered at WWTW and/or ITW.

Capacity of treatment works

62. The “capacity” of a treatment works refers to the volume and strength of waste a works can treat in any given period based on the regulatory requirements and the works’ individual waste management licence issued by the Environment Agency. The amount and type of waste that WWTWs and ITWs can accept is limited by a daily capacity based on the chemical oxygen demand (“COD”) and chemical content of the wastes. Accepting waste with a high COD and/or chemical content will reduce the amount of other waste a treatment works can accept and treat over that period.

63. Trade effluent added to the inlet of a WWTW will have an effect on the capacity of the works; the exact effect will depend on the strength and chemical content of the waste. As far as landfill leachate is concerned, it should be noted that “complex leachate may not behave like other waste waters, thus affecting design and operating criteria (e.g. chemical dosage requirements), and invalidating extrapolations from other experiences”. A third party Water and Sewerage Company (“WaSC”) has told Ofwat that “tankered wastes present significant operational risks because of the potential for process damage, and have to be carefully vetted in advance to

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64 The ‘Red List’ is a UK list of priority water pollutants chosen because of their toxicity, persistence and tendency to bioaccumulate. The four substances, namely: mercury, PCP (pentachlorophenol), PCB (polychlorinated biphenyl) and TCB (trichlorobenzene) are not used in any IPC (Integrated Pollution Control) authorised processes. Such pollutants come from the residues of past manufacturing activities dating back to the 1950s.
65 Polychlorinated biphenyl.
66 A discharge consent prescribes limits on the composition of discharges to water courses.
67 A waste management licence is a legal document issued under the Environmental Protection act 1990. The licence authorises the treatment, keeping or disposal of waste in or on the land.
68 Department of Environmental Quality, USA.
ensure that potential problem wastes are excluded from the sewage treatment works.”

Transport of landfill leachate to a treatment facility

64. In the Director’s view, the treatment of landfill leachate falls into two distinct markets, one where landfill leachate is directly disposed to sewer for treatment by the appropriate WaSC and the other where the landfill leachate has to be tankered offsite for treatment before it can be disposed to sewer. Since LTP that discharge directly to watercourse have no need for third party treatment they are not considered in the Director's assessment of transport of leachate to a treatment facility.

65. If a landfill site produces a larger volume of leachate than its consents allow; the excess must be tankered off-site. At some sites no landfill leachate at all can be disposed to sewer due to the level of contamination of the waste, and therefore all leachate produced must be tankered to a treatment works.

66. Waste transported by sewer can, by law, only be treated by the licensed WaSC of that area\(^69\). Tankered waste can be dealt with by any undertaking with the appropriate infrastructure and technical expertise.

67. With regard to treatment of landfill leachate, the website www.leachate.co.uk states that “Tankerage is always the most expensive option.” Most tankered landfill leachate is from landfill sites that the Environment Agency classifies as hazardous\(^70\). Operators in the relevant market consider that the treatment of tankered waste is recognised as a separate market from waste disposed to sewer, because waste is only tankered out of necessity and because the cost of tankering is significantly greater than the cost of disposal to sewer.

DEMAND-SIDE SUBSTITUTION

68. The first question to examine in considering the relevant product market is whether, from the point of view of customers, the products are in the same relevant product market (“demand side substitutability”). In its guideline on market definition (December 2004) the OFT states that the “hypothetical monopolist” test (sometimes called a SSNIP test\(^71\)) will usually be applied to determine if one product is in the same relevant product market as another. In essence, that test involves hypothesising that there is a monopoly supplier of a particular product which it is thought might constitute a relevant product market. If the hypothetical monopolist could

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\(^{71}\) SSNIP stands for a small but significant non-transitory increase in price.
successfully impose a 5-10% non-transitory price increase\textsuperscript{72} without losing so many customers to other products that the price rise would be unprofitable, then the product is a relevant product market. If, however, sufficient numbers of customers would switch to a substitute product to render the price rise unprofitable, then the substitute product should also be included in the relevant product market.

69. The difficulty here is that the Director has no direct evidence on the response of landfill sites to a 5 – 10% increase in price of tankering or treating tankered waste, and it is very difficult in the circumstances of this case to see how robust quantitative evidence of the necessary kind could be obtained. Moreover, it is not safe in the context of this case to assume that actual prices have been at competitive levels.

70. The Director’s approach is therefore to analyse the evidence before him in the round in order to assess the extent to which the existence of other methods of disposing of trade effluent in general, or landfill leachate in particular, acts as a competitive constraint on, or brings sufficient competitive pressure to bear on, the treatment of tankered landfill leachate for those methods to be regarded as competing in the same relevant product market; see Aberdeen Journals v. DGFT [2003] CAT 11 at [121]-[122] and [128]. In doing so, he bears in mind the “hypothetical monopolist” test set out in the OFT’s guidelines as indicating the degree of substitutability between products that is necessary if those products are to be regarded as being in the same relevant product market.

71. There are three main treatment options for a landfill site producing leachate that cannot be disposed to sewer in its current condition: treatment at a WWTW, treatment at an ITW or treatment at an LTP. In the case of ITWs, it is likely that the leachate will ultimately be treated at a WWTW before discharge to watercourse, as in most cases ITWs treat the leachate to a standard at which it can be discharged to sewer and then treated by the WWTW. An LTP can either dispose treated landfill leachate to sewer where it will then be added to the inlet of the receiving WWTW or to watercourse, depending on its location and the nature of the treated effluent produced.

72. Treatment at a WWTW operated by a statutory sewerage undertaker appointed under the Water Industry Act 1991 (“WIA91”).\textsuperscript{73} All WWTWs can accept domestic sewage and some can also accept trade effluent transported by sewer. However, many WWTWs are not able to accept tankered waste. The amount and type of waste a WWTW accepts vary

\textsuperscript{72} The 5-10% increase is the usual range that will be considered; OFT guideline on market definition, paragraph 3.3.

\textsuperscript{73} The appointments were made by the Secretary of State or the Director General under Sections 11 and 14 of the Water Act 1989 (now Sections 6, 7, 11 and 12 of the Water Industry Act 1991).
according to the size of the works, the site infrastructure and the Waste Management Licence issued to each undertaker under the Environmental Protection Act 1990 or a permit issued under the Pollution Prevention and Control Regulations 2000 (both granted by the Environment Agency).

73. **Treatment at an ITW.** ITWs provide a wide range of services, including the collection, transportation and treatment of various types of trade effluent. Many ITWs operate landfill sites and often provide transport services to a main ITW for pre-treatment before discharging to sewer or pre-treating and transporting by tanker to a WWTW. In some cases, ITWs tanker landfill leachate to a WWTW without pre-treatment. Few ITWs can accept high strength landfill leachate containing substances such as ammonia and PCBs. Seven out of nine of the ITWs in UU’s area are able to treat landfill leachate and only two of these are able to treat landfill leachate containing PCBs and other red list substances.

74. ITWs have a limited capacity to accept waste compared to WWTWs due to the constraints of discharge consents and infrastructure.

75. The main difference between a WWTW and an ITW lies in the treatment options offered. WWTWs predominantly offer biological treatment, whereas ITWs are more likely to offer chemical or physical treatment (two out of seven ITWs in UU’s area that are able to treat leachate offer biological treatment, however one of these uses a WWTW\(^{74}\)). In the case of chemical or physical treatment, it is likely that further treatment of the resulting effluent will be required before it is fit for final discharge. From a landfill site’s viewpoint an ITW is a substitute on the market for the treatment of landfill leachate because the ITW assumes the landfill site owner’s responsibility to dispose of the leachate in an appropriate and lawful manner. However, an ITW is actually an imperfect substitute because it is not able to offer complete treatment and disposal in its own right; i.e. it is unable to treat fully landfill leachate without a WWTW. Landfill site operators’ ability to switch to ITWs is also constrained by a limit on available capacity at ITWs. However since capacity is variable and ITWs are able to accept and dispose of at least some leachate, the Director has for present purposes considered treatment at ITWs as a substitute for treatment of tankered leachate by WWTWs.

76. ITWs may apply for consent from the Environment Agency\(^ {75}\) to discharge to controlled waters, including coastal waters or ground water\(^ {76}\); however, it is more difficult for ITWs to satisfy the criteria for obtaining such consents

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\(^{74}\) See paragraph 56 and footnote 61.

\(^{75}\) A discharge consent within the meaning of section 91(8) of the Water Resources Act 1991.

\(^{76}\) The Ground Water Regulations 1998, SI 1998, No. 2746 define “Ground water” as “all water which is below the surface of the ground in the saturation zone and in direct contact with the ground or subsoil”.
than it is for WWTWs. As stated above it is likely that without biological treatment, the effluent produced following treatment would not meet the standards for direct discharge.

77. Of the nine ITWs asked in a s.26 notice issued by Ofwat dated 2 July 2003, none had consents to discharge to ground water. This means that any leachate accepted must then be discharged to sewer (or tankered to a WWTW) and further treated by a WWTW.

78. **Onsite treatment by the landfill site that produces it.** It is an expensive process to build an LTP that can treat leachate of the type that would otherwise need to be tankered to a standard at which it can be discharged to sewer. In general LTPs cost in the region of £200,000 and £1,000,000 to design and build; however the costs vary on a site by site basis, and may be considerably larger. For example, Arpley landfill site built an LTP in 2001, for which the capital cost was over £2 million. Due to the variability of leachate, each LTP has to be designed using treatment options specific to the content of the leachate to be treated. Once the plant has been built, the landfill site must apply for a trade effluent consent to dispose to sewer from the incumbent WaSC or for a consent to discharge the treated effluent to watercourse from the Environment Agency. Depending on the nature of the landfill leachate this process can take 2-12 months to complete; further, it can take six to 18 months to construct an LTP.

79. Where it takes purchasers more than a year, as well as considerable expense, to switch from purchasing product A to purchasing product B, those two products are not usually regarded as being in the same relevant product market (at least when seen from the demand side); it is in general appropriate to treat “self-supply” as being in the same market only where switching to self-supply is relatively quick and costless. The Director therefore takes the view that in this case LTPs are not in the same product market as treatment of tankered landfill leachate by WWTWs or ITWs. Nonetheless, he notes that, according to UU, over the last two years it has lost [...]% (by number) of its landfill leachate customers because they have built onsite treatment plants, and that [...]77. He therefore accepts that the threat of building an LTP does pose a competitive constraint upon firms that treat tankered leachate, and takes account of this when considering the question of whether UU holds a dominant position.

80. UU has in addition argued that supply by landfill operators with an LTP of LTP services to other landfill operators should be regarded as being in the same market78. The Director accepts that any LTP that accepts leachate from another operator’s landfill site would thereby compete with ITWs and

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77 Information provided by UU under the cover of a letter dated 6 October 2004.
78 Response to draft decision, 24 March 2005, page 7.
WWTWs. However as set out in paragraph 58 when asked neither ITWs nor WWTWs stated that they competed against LTPs. Moreover, UU has suggested no more than that “some” LTPs have spare capacity and “(may) have started offering treatment to other landfill sites.” The only example given is, however, one where regulatory approval is currently being sought, and so is presumably not yet competing (let alone an actual or potential competitor at the material time). The Director is therefore not satisfied that there has been any significant actual or potential competition of that type, at least at the times relevant to the complaint.

Factors constraining and facilitating demand-side substitution

A. Transport costs

81. Transporting landfill leachate by tanker is expensive, as landfill leachate is heavy. There are also a limited number of WWTWs and ITWs which can accept tankered landfill leachate. Total transport cost increases with distance, therefore more distant treatment works are uneconomic to use. Landfill operators incur an additional tanker reception charge at a WWTW, which is not payable for landfill leachate transported by sewer.

82. Tankering prices are an important factor when landfill site operators make the choice of where to tanker landfill leachate. Increased tankering costs due to longer transport distances have a constraining effect on demand-side substitution. One source states: “Tankering costs make tankerage a costly option for most sites in anything but the lowest volumes, or short term.”

B. Storage of landfill leachate

83. One factor facilitating demand-side substitution is that some landfill sites can store excess leachate temporarily either on or off site. This may give landfill site operators time to build an onsite treatment works, obtain the necessary discharge consents, or arrange an alternative treatment provider. In this way, the landfill site can avoid tankering leachate to a WWTW or ITW in some circumstances. However, this is a short-term and expensive option and is very unlikely to be available for the whole length of time it takes to build an onsite treatment works or obtain consent. Therefore, storage is likely to have a limited impact on demand-side substitution.

SUPPLY-SIDE SUBSTITUTION

79 www.leachate.co.uk.
84. Supply-side substitution exists if undertakings not currently supplying the product at issue would enter the market to supply that product at short notice in response to an increase in price of that product. Supply side substitution would, under the “hypothetical monopolist” approach, lead to product A being regarded as being in the same product market as product B if a hypothetical monopolist of product A were unable to impose a 5-10% non-transitory increase in price of product A above competitive levels because that would result in sufficient producers of product B switching to producing product A to render the price rise unprofitable. Again, it is not possible on the evidence available to carry out this analysis in a precise way, and the matter is considered taking the available evidence in the round while bearing the “hypothetical monopolist” test in mind as indicating the degree of supply-side substitutability necessary for a conclusion to be reached that the products concerned are in the same product market; see paragraph 66 above. Potential supply-side substitutes are considered below.

Treatment by an existing WWTW that could switch to accepting more or some landfill leachate

85. The main businesses which are likely to be in a position to enter the market for the treatment of landfill leachate are existing WWTWs currently unable to treat tankered landfill leachate but which possess the equipment and expertise to treat it and which could potentially treat it if it became attractive for them to do so.

86. WWTWs are large and often have the option to redistribute capacity at various works in order to accept more tankered waste (specifically leachate), if this became a desirable option.

87. However, since UU owns all the WWTWs in the North West, the question for present purposes is whether WWTWs outside the North West are able to compete for the custom of landfill site owners in the North West; this issue is considered in the geographic market section below.

ITWs treating other types of effluent but not currently treating landfill leachate

88. A number of undertakings active in the waste treatment sector in UU’s appointed area were contacted to find out their views on the market. Of those contacted, seven currently treat third party landfill leachate. Of the remaining undertakings none took the view that they would be able to start treating leachate easily should a price increase occur. The primary reasons given are that some of the undertakings do not possess the appropriate plant and others do not currently hold an appropriate trade effluent consent.
89. The ITWs that currently provide treatment of landfill leachate are included as substitutes within the relevant market. However it should be noted that there would be a limit on the volume of any additional leachate which they could treat, given the restrictions imposed by the terms of their trade effluent consent permitting them to discharge to sewer (see below). Their ability to re-negotiate those restrictions will in turn depend on the terms of the WML of the receiving WWTW. On the other hand, ITWs may be more of a competitive constraint than the preceding analysis suggests because UU does not have a clear understanding of the mix and relative volumes of waste streams being treated by an ITW at any one time and is therefore not well placed to predict when an ITW may find it convenient to take greater volumes of leachate.

90. Some of the undertakings contacted said that they would not be prepared to treat any further landfill leachate due to its variable nature and the relatively low profit levels involved. However, others stated that if prices rose they would consider treating more leachate although, at present, the market rate is below their costs. Moreover some ITW use landfill leachate as a diluent for more difficult waste streams; this can result in competitive prices for the treatment of leachate.

Factors constraining and facilitating supply-side substitution

A. Obtaining a trade effluent consent

91. The main barrier to entry to any business wishing to treat landfill leachate or any landfill site wishing to build its own treatment works is the need to obtain a new or amended trade effluent consent from the statutory sewerage undertaker. The undertaker is the appointed WaSC in the relevant area. A new or altered trade effluent consent takes time to obtain due to the need for the applicant and the WaSC to negotiate appropriate conditions (anything between 2 months and 2 years). This delay means that any supply-side substitution may take several months or years, especially for a completely new entrant to the market.

B. Equipment and capacity to accept landfill leachate

92. If a new entrant were to set up a treatment works, it would require the appropriate staff and equipment and permits from the Environment Agency. The establishment of a new facility would be a lengthy process

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80 Ofwat has powers to determine the refusal to give a consent or to alter consents issued by sewerage undertakers. Section 122 WIA91 “Any person aggrieved by— (a) the refusal of a sewerage undertaking to give a consent for which application has been duly made to the undertaker under section 119 above; may appeal to the Director.” (See also section 122 (b) and (c)).
and likely to take more than a year, so we do not consider completely new entrants to the market to be a likely supply-side substitute. However, as previously stated, existing WWTWs or ITWs that do not currently treat leachate could switch to treating leachate. This is due to the similarity in treatment processes between leachate and other types of trade effluent. An existing WWTW or ITW may have much of the necessary infrastructure and staff, and therefore could adapt to treat landfill leachate. A potential constraint on this switching is that each works has a daily capacity based on the size of its treatment works and COD of the waste it can accept. Therefore, if a works did not increase in size it would have to cease treating a certain volume of another waste in order to treat leachate (assuming a works is operating at full capacity).

**Conclusion on the product market**

93. The Director has concluded that there are no grounds for action as a result of this complaint and as such he is not obliged to reach a conclusion regarding the relevant market or the position of UU with regard to the market. However, due to the large amount of analysis that he has conducted during the course of his consideration of the complaint he sets out below his current thinking regarding the relevant market.

94. The Director considers that landfill leachate is likely to be a distinct type of liquid waste due to its highly variable nature and the consequent difficulties of treatment compared to other forms of liquid trade effluent (see paragraph 54 above). Consequently, he takes the view that the treatment of landfill leachate is likely to constitute a distinct market within treatment of liquid trade effluent. The views of treatment sites and ITWs support this conclusion.

95. The Director considers that treatment of landfill leachate transported by tanker is likely to be a distinct product from treatment of leachate disposed to sewer. That is because the content and strength of landfill leachate that must be transported by tanker is different to that of leachate that can be disposed to sewer. Moreover, given the different composition of leachate that must be tankered, it is possible for any ITW or WWTW to price such leachate at a higher price than is charged for leachate that may be disposed of to sewer; indeed, given the need for more expensive treatment of leachate that must be tankered, there is no reason why the price of treating such leachate should match prices for disposing of leachate lawfully disposed to sewer. In addition, treatment of tankered landfill leachate falls outside the regulated business of a WaSC. The Director therefore considers that treatment of tankered landfill leachate is likely to be a separate market to landfill leachate transported by sewer; he notes that operators in the market share this view.
96. In practice, there are three possible types of treatment for tankered landfill leachate: tankering for treatment at a WWTW, tankering for treatment at an ITW, or building an LTP. Building an LTP is an increasingly attractive option and therefore acts as a significant competitive constraint on firms within the market for the treatment of tankered landfill leachate. Once the LTP is built that customer will effectively exit the market.

97. Some existing waste treatment undertakings in UU’s licensed area would be capable of treating some or more tankered landfill leachate in response to a small but significant non-transitory increase in price if they had the infrastructure to receive tankers and if they currently treated other types of liquid waste. However, it is unlikely that they could treat any significant proportion of the landfill leachate generated, due to limited capacity. Of the ITWs contacted, many treat only a small amount of landfill leachate in comparison with other wastes that they receive. Several ITWs have stated that treating landfill leachate is a low profit business compared to treating other types of trade effluent, which makes them reluctant to treat more landfill leachate. As previously stated the need to obtain a new or amended trade effluent consent prior to discharge is another significant entry barrier. Nevertheless, ITW still to some extent pose a competitive constraint; they are able to treat some leachate, and as set out in paragraph 96 UU is unaware how much leachate a particular ITW can treat at a particular time.

98. The Director therefore concludes that the relevant product market, at least at the time material to the complaint, is likely to have been the market for the treatment of tankered landfill leachate.

THE GEOGRAPHIC MARKET

99. The geographic area subject to the complaint is the area in which QWM operated. This is predominantly the North West of England and North Wales. UU’s appointed area is the North West of England. However, UU also owns Hyder which operates WWTW in North Wales. Therefore, Ofwat’s initial working hypothesis was that the geographic market in this case is the North West of England and North Wales.

100. Sewerage services are part of a WaSC’s Appointed Business\(^{81}\) and, as such, a WaSC operates within a designated area of England and Wales as

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\(^{81}\) An appointed business is the company that holds an appointment to provide water and sewerage services in a geographic area. At privatisation, the ten water and sewerage companies became public limited companies. They established a company structure with a group holding company (the plc). The core business of providing water and sewerage services was transferred to a subsidiary company (known as the "appointed company" or "appointee"), acting under an instrument of appointment granted by the Secretaries of State for the Environment and for Wales. The water only companies were brought under the same regulatory control.
specified in its terms of appointment. Although treatment of tankered waste falls outside the Appointed Business, information given to Ofwat indicates that most WaSCs operate in the landfill leachate treatment market within the area covered in their Instruments of Appointment. Information provided by the WaSCs bordering the North West and North Wales area indicates that none of those undertakers questioned currently operate or have considered operating a treatment works to accept tankered waste in another Appointed WaSC’s area. However one WaSC does have a joint venture with its non-appointed business which presently operates a limited service based at one of its landfill sites outside its Appointed area.

101. Landfill sites, if discharging landfill leachate by sewer, will discharge to the sewer operated by the WaSC in that area. However, since the treatment of tankered landfill leachate falls outside the Appointed Business the landfill site has the choice of where to send tankered landfill leachate. In reality, since transport costs are high, in most circumstances landfill sites tanker their landfill leachate to the closest treatment option, which suggests a localised geographical market. Choice of where to send tankered landfill leachate may well also be affected by the existing relationship between a landfill site that discharges to sewer and the appointed WaSC. Since some landfill sites remove their landfill leachate by both sewer and tanker, it is common for them to use the same provider for both services.

Sites in the relevant geographical area

102. UU has 618 WWTWs in the North West of England. 172 of these sites have extant trade effluent consents and 46 have extant consents for landfill leachate to drain into them. However, only nine WWTWs in the area are able to receive landfill leachate by tanker.

103. There are seven ITWs in the North West capable of accepting landfill leachate by tanker.

DEMAND-SIDE SUBSTITUTION

104. Demand-side substitution takes place in the geographic market when a consumer can switch to a supplier in a neighbouring area following a small, significant non-transitory increase in price. That area may then be considered part of the geographic market. The Director again takes the approach to this issue set out in paragraph 68 above.

105. Substitution within the North West is likely and it is quite common for landfill leachate to move short distances within sub-areas of the North West. However, it is less common for leachate to move outside the North
West. One landfill site that produces large amounts of leachate needing to be tankered off site informed Ofwat that it has not sent any leachate outside the North West.

106. Another landfill site stated: “We would only switch treatment provider if the overall costs for transport and disposal could give a reduction in cost”.

107. Ofwat’s investigation has shown that the average distance landfill leachate is transported by operators in the North West is 30 miles\(^{82}\). This illustrates that for landfill sites on the edge of an undertaker’s area of appointment, WWTWs and ITWs in neighbouring areas could be part of the geographic market. There are a number of landfill sites that transport leachate significantly further than the average distance. Some sites tanker leachate from outside the North West to WWTW or ITW within the North West\(^{83}\). In a majority of these cases, the landfill sites tanker leachate to more than one WWTW. The main WWTW used may be close to the landfill site but excess leachate may be tankered further to other sites run by the same operator. Of UU’s landfill leachate customers, only three out of 21 travel a significantly longer distance than the average across all cases of 30 miles. In addition, longer journeys may simply result from occasions where a more local works does not have the capacity to accept the waste. The Director therefore considers that the relevant geographic market for each landfill site consists of works able to take tankered landfill leachate within a 30 mile radius of the landfill site.

108. An important consideration is the variability of landfill leachate produced at sites that need to tanker the leachate offsite. The capacity of any works depends on the nature of other waste that it receives and the strength of the leachate. Some leachates will have significantly fewer options for disposal than others and therefore are likely to travel further to obtain treatment services. This indicates that there are likely to be individual markets for each landfill site depending on its specific needs concerning strength, content and volume.

109. UU provided Ofwat with a copy of a proposed market definition paper\(^{84}\) which suggested that the geographic market for the treatment of tankered landfill leachate could extend to the whole of the UK via a chain of substitution\(^{85}\). However, the Director does not consider that it has been shown that there is a chain of substitution such as to lead to the conclusion that the geographic market is the whole of the UK. The chain of

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\(^{82}\) This average distance includes landfill sites located in North Wales which tanker to WWTW in UU’s appointed area.

\(^{83}\) For example landfill sites operated by Hyder, which is owned by UU, tanker from North Wales into the North West of England.

\(^{84}\) Under cover of a letter dated 30 January 2003. Oxera wrote the paper.

\(^{85}\) For a discussion of the issues regarding chains of substitution see S Bishop and M Walker (2\(^{nd}\) edn. 2002) “The Economics of EC Competition Law” paragraphs 4.72 – 4.73.
substitution argument depends on the supplier being unable to price discriminate against a customer that is unable to switch; since suppliers know the location of their customers and are able to price discriminate, that condition is not satisfied here.

110. Further, UU will in any event be aware that customers using its WWTWs are unlikely to be able to transport their waste out of UU’s area. For example, if a landfill site operator produces 1,600 m$^3$ of landfill leachate per month and is charged £10 per m$^3$ for treatment it pays a total of £16,000 for treatment. If the price rises by 10% to £11 per m$^3$ the customer now pays a total of £17,600 per month; a difference of £1,600. In this example, assume that the customer also pays a total of £6,250 per month for the transport over 20 miles of 50 tankers of landfill leachate. If the closest WWTW outside the area is 50 miles away. The customer would be charged £9,375 for the transport of 50 tankers of landfill leachate. An increase in its transport costs of £3,125. This illustrates that in this case the customer would be worse off if it switched treatment provider due to the higher transport costs, despite the increase in the treatment price by its original treatment provider. In this example, the customer was only 50 miles from a WWTW in a different area; if the customer had been based a long way from the boundary of UU’s area, the example would have made the point even more strongly.

111. Although a few landfill sites do tanker their leachate further than 30 miles (because of their location a long way from any treatment plant and/or the strength of their waste), Ofwat’s investigation shows that even in those cases landfill sites continue to tanker their leachate within the North West. Only three of UU’s landfill leachate customers have previously used treatment facilities outside the North West.

112. Although the Director takes the view that the North West of England and North Wales is the relevant geographic market in this case, it is important to emphasise that no conclusions should be drawn about the view he would take in respect of other areas of England and Wales, where conditions could well be rather different in important respects – for example, the geographic market could well extend beyond the area of a particular WaSC where, in contrast to the North West, there are few treatment plants in that area and landfill operators are therefore in any event obliged to transport the waste for a considerable distance.

**SUPPLY-SIDE SUBSTITUTION**

113. Supply-side substitution exists when an undertaking can enter the market with reasonable speed and cost in response to an increase in price. It

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86 This example is hypothetical.
87 Based on the assumption that haulage is £5/m$^3$ and that the tankers used of 25m$^3$. 
would be difficult for a firm outside the North West and North Wales to treat profitably tankered landfill leachate unless there was a large price increase that made transport costs a relatively small proportion of total costs. However, in defining geographic markets, suppliers in different areas are regarded as competing with suppliers in the area concerned only if there is likely to be substantial switching as a result of relatively small increases above competitive levels.

114. The most recently available Environment Agency figures published in the "Strategic waste management assessment (SWMA) 1998 – 1999" show that only 8% of commercial and industrial waste in 1998 – 1999 was exported outside the North West. In addition whilst there is some movement within sub-regions of the North West the SWMA also illustrates that in most cases industrial and commercial waste remains within the sub-region that produces it. For example Cumbria produced 929,000 tonnes of commercial and industrial waste and 549,000 tonnes of it remained within Cumbria, Greater Manchester produced 1,441,000 tonnes and 1,008,000 tonnes remained in Greater Manchester. The only sub-region of the North West that treated less than half its own waste is Mid Mersey; this is because it is the smallest area and has fewer treatment works than other areas. The majority of its waste goes to the closest sub region, which is Greater Manchester, rather than out of the North West.

Conclusion

115. Due to high transport costs each landfill site has a specific market of 30 miles radius and landfill operators only consider the treatment sites in their immediate vicinities, unless they are unable to find a treatment supplier in that area, in which case the landfill operator will look further for appropriate treatment. Ofwat has limited its analysis of 30-mile radius markets to the North West of England, as this is the area subject to the complaint.

116. For practical purposes, however, the Director has taken the view that the relevant geographic market is likely to be the North West of England and neighbouring areas of North Wales.

Conclusion on the relevant product and geographic market

117. As stated above the Director is not bound to reach a conclusion regarding the relevant market in this case. However based on the information available to him, the Director takes the view that, at least at the time material to this complaint, the relevant market is likely to be that for the treatment of tankered landfill leachate within an area covering the North West of England and some neighbouring landfill sites in North Wales.
DOMINANCE

118. The European Court of Justice (ECJ) has defined dominance as: “...a position of economic strength enjoyed by an undertaking which enables it to prevent effective competition being maintained on the relevant market by affording it the power to behave to an appreciable extent independently of its competitors, customers and ultimately of consumers.”

119. In assessing whether an undertaking has a dominant position in a market the Director considers whether, and to what extent an undertaking faces or would face constraints on its ability to behave independently. Those constraints might be:

- “The existence of competitors and their relative position on the market;
- The potential for new market entrants, which can often be indicated by a lack of significant entry barriers or existing undertakings which could easily enter the market; and
- Monopsonist conditions on a market where strong buyer power can counteract a dominant undertaking’s ability to act independently.”

QWM’s views on UU’s dominance

120. QWM told Ofwat that 95% of leachate in the North West (from North Wales to the Scottish border) went to UU operated waste management facilities due to UU’s capacity and geographic spread.

121. QWM did not provide any evidence to support its assertions with regard to UU’s dominance.

UU’s view on dominance

122. UU set out its preliminary view of the market, which included an estimate of its market share of approximately 12.5% of the liquid/sludge treatment market. However with sole reference to landfill leachate UU accepted that it ultimately treats 92% of all available leachate in the North West following discharge to sewer. UU did not distinguish between landfill leachate transported directly to sewer and landfill leachate transported by tanker before discharge to sewer.

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89 OFT Guideline 415 Assessment of Market Power.
90 In a fax dated 1 March 2003.
91 letter to Ofwat dated 4 March 2002.
MARKET SHARES

123. The European Court has stated that dominance can be presumed in the absence of evidence to the contrary if an undertaking has a consistent market share of 50% or more.\textsuperscript{92}

124. Market share can be measured by volume or value of sales. In the case of landfill leachate, volume is usually measured in cubic metres ($m^3$) or tonnes\textsuperscript{93}. As set out below, it can be demonstrated that UU has a high share of this narrowly defined market whether calculated by volume or value of sales.

Market share of the market for the treatment of tankered landfill leachate


Table one: Volume of landfill leachate (including imported leachate) treated by undertakings at WWTW and ITW in the North West of England between January to December 2000 and 2001.

<table>
<thead>
<tr>
<th>Company</th>
<th>Volume in tonnes treated in 2000</th>
<th>Percentage of total</th>
<th>Volume in tonnes treated in 2001</th>
<th>Percentage of total</th>
</tr>
</thead>
<tbody>
<tr>
<td>UU (Bioprocessing)</td>
<td>[...]</td>
<td>[...]</td>
<td>[...]</td>
<td>[...]</td>
</tr>
<tr>
<td>Alco Waste Management Ltd.</td>
<td>[...]</td>
<td>[...]</td>
<td>[...]</td>
<td>[...]</td>
</tr>
<tr>
<td>(“Alco”)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Biffa Waste Services Ltd.</td>
<td>[...]</td>
<td>[...]</td>
<td>[...]</td>
<td>[...]</td>
</tr>
<tr>
<td>(“Biffa”)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Neston Tank Cleaners Ltd.</td>
<td>[...]</td>
<td>[...]</td>
<td>[...]</td>
<td>[...]</td>
</tr>
<tr>
<td>(“NTC”)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Onyx Waste Management Ltd.</td>
<td>[...]</td>
<td>[...]</td>
<td>[...]</td>
<td>[...]</td>
</tr>
<tr>
<td>(“Onyx”)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shanks Waste Services Ltd.</td>
<td>[...]</td>
<td>[...]</td>
<td>[...]</td>
<td>[...]</td>
</tr>
<tr>
<td>(“Shanks”)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CSG Lanstar Ltd.</td>
<td>[...]</td>
<td>[...]</td>
<td>[...]</td>
<td>[...]</td>
</tr>
</tbody>
</table>


\textsuperscript{93} One cubic metre of water is equivalent to one tonne of water and is used interchangeably.
<table>
<thead>
<tr>
<th>(“Lanstar”)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Volume of leachate treated in tonnes</td>
</tr>
<tr>
<td>206,286.08</td>
</tr>
<tr>
<td>266,717.5</td>
</tr>
</tbody>
</table>

Source: Responses to s.26 notices issued by Ofwat dated 28 January 2002 and 2 July 2003.

127. Based on the analysis set out in the table above UU has a market share of [...]% in 2000 and [...]% in 2001.

128. To calculate market share based on value Ofwat has analysed each undertaker’s prices and amounts treated in 2001.

Table two: Market share calculated by value in 2000 and 2001

<table>
<thead>
<tr>
<th>Company</th>
<th>2000</th>
<th>2001</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>m³</td>
<td>Market value</td>
</tr>
<tr>
<td>UU</td>
<td>[...]</td>
<td>[...]</td>
</tr>
<tr>
<td>Alco</td>
<td>[...]</td>
<td>[...]</td>
</tr>
<tr>
<td>Biffa</td>
<td>[...]</td>
<td>[...]</td>
</tr>
<tr>
<td>NTC</td>
<td>[...]</td>
<td>[...]</td>
</tr>
<tr>
<td>Onyx</td>
<td>[...]</td>
<td>[...]</td>
</tr>
<tr>
<td>Shanks</td>
<td>[...]</td>
<td>[...]</td>
</tr>
<tr>
<td>Lanstar</td>
<td>[...]</td>
<td>[...]</td>
</tr>
<tr>
<td>TOTAL</td>
<td>206,286.08</td>
<td>£1,524,751.30</td>
</tr>
</tbody>
</table>

Source: Responses to s.26 notices issued by Ofwat dated 28 January 2002 and 2 July 2003.

129. Table two shows that by value UU had an [...]% market share in 2000 and a [...]% market share in 2001. This differs from UU’s higher market share when calculated by volume. The main difference is that Alco has a higher market share when measured by value compared to its market share when measured by volume. This is because much of the landfill leachate that Alco treats comes from foot and mouth burial sites and is costly to treat. When measured by value UU still has a market share of over 50%.

130. In recent years several landfill sites have built LTPs and left the market for tankered landfill leachate. The fact that UU has lost these customers will have little effect on UU’s market share, as the market will shrink accordingly. Nonetheless, UU’s market shares need to be considered

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94 Table two illustrates the total number of cubic metres of landfill leachate treated by each undertaker on the market and the total charge to customers of treating that leachate.

95 We considered excluding Alco from the market on the basis that the foot and mouth leachate it treats is different to more standard types of landfill leachate. However Alco treated some landfill leachate in later years and so acted as a substitute to UU.
against the background of the possibility that landfill sites will leave the market by building LTPs – the Director has already accepted that this possibility is a constraint on UU, albeit not a substantial enough constraint for “self-supply” to be regarded as being in the relevant product market.

POTENTIAL COMPETITORS

131. There are two types of potential competitor in the market for the treatment of tankered landfill leachate:
   - WWTW or ITW operators already treating tankered trade effluent, or
   - New entrants that build or buy a WWTW or ITW in order to treat landfill leachate.

132. LTPs are not considered as potential competitors as at the time of the complaint LTPs were not considered by UU or the other WWTW or ITW to be competitors on the relevant market. However, the Director has taken account of the fact that by building a LTP a customer may exit the market and by threatening to do so may exert competitive pressure on its treatment provider to negotiate a better price.

133. Ofwat has evidence that some appointed undertakers for areas contiguous to UU’s appointed area accept small amounts of leachate from other appointed areas. However two of the three neighbouring WaSCs do not actively compete against other appointed sewerage undertakers for the business of treating tankered landfill leachate. This is because leachate is a heavy liquid to transport but creates low levels of revenue and is not profitable to transport long distances. In addition there are a number of ITWs in the North West and surrounding areas that accept landfill leachate.

134. A new entrant to the landfill leachate treatment market would need either to buy an existing treatment works or build a new treatment plant; this would appear to represent a significant barrier to entry. There is no evidence of new entrants in the form of ITW or WWTW entering the market. However there has been market exit by customers that have built onsite treatment plants.

135. The barriers to entering the market that potential competitors would face are considered below.

136. There are also six WWTW operated by other WASC\(^{96}\) that are located close to the border of UU’s area and can accept landfill leachate.

BARRIERS TO ENTRY

\(^{96}\) Operated by YKS and SVT.
137. Barriers to entry can be defined as “...factors that allow an undertaking profitably to sustain supra-competitive prices in the long term, without being more efficient than its current rivals”\(^97\).

138. Potential entrants would face barriers to entry that could be high or low depending on the starting position of the entrant. Overall, a new entrant will face higher barriers to entry than an existing treatment works that diversifies to treat landfill leachate.

**Regulatory Barriers to Entry**

139. Regulatory barriers to entry take the form of a WML or a Pollution, Prevention and Control permit\(^98\) (“PPC”) which are required to operate a waste treatment works. The WML and PPC are issued by the Environment Agency. There is no quantitative restriction on the number of such licences and permits that may be issued, but the tests that must be passed are stringent. In addition to dispose waste to sewer an ITW requires a trade effluent consent\(^99\) which is issued following negotiation with the appointed undertaker\(^100\).

**Barriers facing New Entrants**

140. From 1 January 2001,\(^101\) a new entrant needs to obtain a PPC permit\(^102\) to operate a waste disposal facility dealing with hazardous waste. Alternatively a new entrant could obtain a consent to discharge to controlled waters\(^103\). However, these consents can be difficult to obtain (no ITW in the North West is consented to discharge to watercourse). These application processes take between 6 months and 12 months to complete and act as an entry barrier for potential entrants.

141. Consents may also specify a maximum permitted discharge, or limit the content of waste, and so effectively impose a capacity constraint; that can plainly reduce the extent to which a new entrant can compete.

142. A new entrant into the market for the treatment of landfill leachate would need to weigh up the expected revenue from entering the market against

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\(^{97}\) OFT 415 Assessment of market power, December 2004.

\(^{98}\) The PPC regime requires that any person operating an installation or mobile plant (as defined in the Regulations) after the prescribed date must obtain a permit from the environmental regulator and comply with the conditions in that permit.


\(^{100}\) Ofwat has powers to determine the refusal to give a consent or to alter consents issued by sewerage undertakers. Section 122 WIA91 “Any person aggrieved by— (a) the refusal of a sewerage undertaker to give a consent for which application has been duly made to the undertaker under section 119 above; may appeal to the Director.” (See also section 122 (b) and (c)).

\(^{101}\) SI 1973 Schedule 3.


\(^{103}\) Controlled waters include rivers, lakes, ponds, streams, canals, coastal waters, estuaries and groundwater. (Ground-waters are any water contained in underground strata, including soils).
the expected costs of entry and the potential costs of exiting the market (which may be necessary if entry is unsuccessful).

143. For a new entrant to build a treatment works, sunk costs would be significant due to the equipment required to operate a treatment facility. The site, buildings and equipment would all need to be purchased or built, as well as the appointment of appropriately trained and qualified staff. Many of these costs would not be fully recoverable should the entrant make an early exit from the market. Ofwat has not assessed the exact cost of entry because it would take longer than 12 months to design and build a treatment facility, so it is not included in the relevant market. However, it is likely to be large compared to any reasonable assessment of expected revenues.

144. There is also a limited and declining volume of leachate on the market. This is because of new restrictions on the disposal of liquid waste at landfill sites, the result of which is that landfill sites are producing, and are likely in future to produce, less leachate than has previously been the case. This would make it harder for potential competitors to enter the market, as there is less leachate available and all business has to be won at the expense of existing suppliers.

145. In the market for the treatment of tankered landfill leachate, the WWTWs possess the largest treatment and disposal capacity. That large capacity generates significant economies of scale. The amount of leachate a works can accept and treat is limited by its acceptance and discharge consents and its size.

146. It is therefore highly unlikely that a new entrant could realistically start an operation the size of an existing WWTW due to a lack of available landfill leachate on the market, economies of scale on the part of existing WWTWs and the regulatory regime.

**Barriers’ facing an existing WWTW or ITW that diversifies to treat leachate**

147. An existing ITW or WWTW not currently treating leachate will already have the relevant consents and permits to discharge to sewer. But the consents and permits may need amending, to take account of additional volume, if the WWTW or ITW were to diversify into the treatment of landfill leachate (or indeed any other waste where the volume to be discharged to sewer is significantly increased). The process can take between 2 and 24 months. Some ITW indicated that they did not accept more leachate due to the difficulty of managing their existing trade effluent consent.

104 The Landfill Regulations 2002.
148. The other option would be for an ITW to apply to the Environment Agency for consent to discharge directly to controlled waters. However, as stated above no ITW in the North West has applied for consent to discharge to controlled waters. It is easier and cheaper to dispose to sewer.

149. Leachate is a low priced liquid to treat but the overhead cost of receiving it is high. This is because, whilst leachate is often diluted by rainwater and is therefore a heavy liquid to transport, it has a low proportion of substances to treat (and earn a return on). Moreover because of landfill leachate’s variability the receiving works cannot be certain which parts of its discharge consent will be taken up by the leachate it receives; there will therefore be uncertainty as to the impact of accepting the waste on the WWTW’s or ITW’s capacity to accept other wastes. One operator has commented that it “does not process more leachate […] as the overhead cost of receiving it is high as compared to the revenue received and the revenue received from other aqueous wastes that it does process presents a much greater profit potential”.

150. A WWTW (operated by a WaSC) has large efficiency advantages when compared with an ITW due to the significantly higher volume of waste that a WWTW is able to treat, due to its greater size and the availability of infrastructure. WaSCs treat all domestic sewage and as such have large treatment facilities and sewerage networks to deal with the waste they receive, they utilise spare treatment capacity to treat tankered non-domestic waste. In addition, biological treatment is more profitable at large scale treatment works. WWTWs are often able to offer lower prices than an ITW whilst making considerable profit. A further difficulty facing ITWs is that at some point in the process the ITW will be a customer of a WWTW in order to secure final disposal of waste, given the inability of any ITW to treat leachate with biological methods.

151. WWTWs owned by other WaSCs outside UU’s appointed area would face the barrier of transport costs if they wanted to diversify into treating landfill leachate originating in the North West.

BUYER POWER

152. A potential constraint on the market power of a seller is the strength of the buyers and the structure of the buyers’ side of the market. The potential market power of a seller is offset by the economic power of a buyer if, in the absence of that buyer, prices would have been higher.\(^{105}\)

153. Evidence collected during the course of Ofwat’s investigation shows that seven of UU’s 23 landfill leachate customers have exited the market in the last two years as they have built onsite landfill leachate plants and

\(^{105}\) OFT 415 Assessment of Market Power, paragraph 6.1.
therefore no longer have a demand for the transport and treatment of tankered landfill leachate. Information provided by UU\textsuperscript{106} showed that a [...] This operates as a competitive constraint on UU. It is true that not all landfill sites would be able to build onsite treatment plants due to the cost of building an LTP and the cost of obtaining a trade effluent consent or sewer connection. However the fact that a number of sites have already built LTPs illustrates that they are in many cases a viable option. The Director notes that the number of landfill sites choosing to build an LTP was increasing over the period to which the complaint related, which strengthens the view that the threat of building an LTP was a significant constraint at that time.

154. In a letter to Ofwat\textsuperscript{107} UU’s solicitors provided data which suggest that in the market for the treatment of tankered landfill leachate, landfill site operators can change the undertaking that collects and treats landfill leachate within a matter of days. This is because the industry does not operate on the basis of long-term contracts. However whilst in some cases a landfill site may be able to switch its treatment provider within a matter of days, in other cases this cannot happen. Switching difficulties are particularly likely to be found in the case of landfill sites classified by the Environment Agency as hazardous, which in fact account for the majority of tankered leachate in the North West. That is because waste classified as hazardous is likely to be significantly stronger and therefore will take up a larger proportion of the solids and COD specified in the receiving works’ trade effluent consent. Of UU’s 23 customers, 14 operate landfill sites which tanker (or have tankered) leachate to UU’s WWTW from landfill sites classified as hazardous. As a result these 14 landfill sites are unlikely to be able to change treatment provider quickly.

155. In any event, any landfill operator seeking to switch from a WWTW to an ITW will find that in most cases the ITW will have limited available treatment capacity, since it will need to redistribute other waste in order to accept additional waste. The ITW would need time in which to achieve this, and could also find that accepting a new tankered leachate customer affected the waste it could accept from other customers. These factors limit the ability of landfill operators to switch to ITWs.

\textbf{Conclusion on market power and dominance}

156. Given the Director’s findings on the question of abuse it is not strictly necessary for him to reach a conclusion on the question of dominance.

\textsuperscript{106} In a letter dated 6 October 2004.
\textsuperscript{107} 30 January 2003.
However, he has come to the following provisional view on the matter, as it stood at the time relevant to the complaint\textsuperscript{108}.

157. In 2001 UU had a [...]\% market share of the market for tankered landfill leachate in the North West when measured by \textit{value}. When measured by \textit{volume} treated, UU's market share at that time increases to [...]\%.

158. There are high barriers to entry for new entrants; however it is relatively easy for an existing WWTW or ITW to accept some or more landfill leachate if its various consents can be managed appropriately.

159. In addition the ability of landfill sites to build onsite treatment plants confers some buyer power and acts as a significant competitive constraint.

160. Overall, the high market share, together with the other factors discussed, indicates that UU was likely to have been dominant in the market for the treatment of tankered landfill leachate in the North West of England and North Wales during the period in question.

\section*{ABUSE OF DOMINANCE}

161. Whilst the Director has not reached a definitive conclusion on the question of the relevant market or dominance, he has considered whether – assuming dominance and a product and geographic market defined as the treatment of tankered landfill leachate in the North West of England and North Wales – UU's behaviour could be considered as abusive.

162. Section 18(2) of the Act provides a non-exhaustive list of types of conduct that will breach the Chapter II prohibition: -

\begin{itemize}
  \item directly or indirectly imposing unfair purchase or selling prices or other unfair trading conditions;
  \item limiting production, markets or technical development to the prejudice of consumers;
  \item applying dissimilar conditions to equivalent transactions with other trading parties, thereby placing them at a competitive disadvantage;
  \item making the conclusion of contracts subject to acceptance by the other parties of supplementary obligations, which, by their nature or according to commercial usage, have no connection with the subject of the contracts.
\end{itemize}

163. The ECJ has stated that the concept of abuse “is an objective concept relating to the behaviour of an undertaking in a dominant position which is such as to influence the structure of a market where, as a result of the very

\textsuperscript{108} The Director notes that the landfill leachate market has changed since 2001 and that this provisional view may not hold true under current market conditions.
presence of the undertaking in question, the degree of competition is weakened and which, through recourse to methods different from those which condition normal competition [...], has the effect of hindering the maintenance of the degree of competition still existing in the market or the growth of that competition.”

164. The ECJ has also stated that an undertaking in a dominant position “has a special responsibility not to allow its conduct to impair genuine undistorted competition”. And in Tetra Pak II, the ECJ held that “the actual scope of the special responsibility imposed on a dominant undertaking must be considered in the light of the specific circumstances of each case which shows a weakened competitive situation.” This special responsibility will be particularly strong where an undertaking is a monopolist or near-monopolist.

EXCESSIVE PRICING

165. QWM alleged that UU was charging QWM more than it would charge trade effluent customers based on the Mogden formula. As part of Ofwat’s investigation it considered whether UU’s prices were excessive.

166. The OFT Guidance states that “charging of excessive selling prices by a dominant undertaking may be an infringement of the Chapter II prohibition.”

167. The ECJ has held that “charging a price that is excessive because it has no reasonable relation to the economic value of the product supplied [...] is an abuse.”

168. In his decision in Napp the Director General of Fair Trading (“DGFT”) stated that a price is excessive for the purposes of the Chapter II prohibition “if it is above that which would exist in a competitive market and where it is clear that high profits will not stimulate successful new entry within a reasonable period. Therefore to show that prices are excessive, it must be demonstrated that (i) prices are higher than would be expected in a competitive market, and (ii) there is no effective competitive pressure to bring them down to competitive levels, nor is there likely to be.”

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109 Case 85/76 Hoffmann-La Roche & Co. AG v Commission, [1979] 3 CMLR 211, para 91.
112 Assessment of Individual Agreements and Conduct OFT 414, paragraph 2.1.
115 The predecessor to the OFT.
116 This paragraph was held by the Tribunal to be “soundly based in the circumstances of [that] case”; Napp v DGFT [2002] CAT 1, [2002] CompAR 13, [390]-[391].
Price

169. The European Court of Justice has stated that the relevant question is “[…] whether the difference between costs actually incurred and the price actually charged is excessive, and, if the answer to this question is in the affirmative, to consider whether a price has been charged which is either unfair in itself or when compared to competing products.”

170. In *Napp*, cited above, the Tribunal observed that “Measuring whether a price is above the level that would exist in a competitive market is rarely an easy task. The fact that the exercise may be difficult is not, however, a reason for not attempting it.”

171. The best way of approaching that difficult task is to try to compare the prices charged with appropriate comparators. In *Napp*, the Tribunal approved the comparisons used by the DGFT in that case, which were “(i) Napp’s prices with Napp’s costs, (ii) Napp’s prices with the costs of its next most profitable competitor, (iii) Napp’s prices with those of its competitors and (iv) Napp’s prices with the prices charged by Napp in other markets. Those methods seem to us to be among the approaches that may reasonably be used to establish excessive prices, although there are, no doubt, other methods.”

172. In the present case the Director has examined such comparators as are available to him and likely to be informative in order to see whether they throw up apparently strong evidence of excessive pricing.

Assessment of prices and costs

173. UU has stated that “there are no policies, procedures or guidance relating to the setting of Bioprocessing’s charges for non-appointed work as these are determined by market forces”.

174. During the course of its investigation Ofwat asked UU on a number of occasions to provide cost justifications or a charging methodology for the price it charges for the treatment of tankered landfill leachate. UU provided a large body of information about its prices but stated that it sets its prices according to market conditions rather than according to a cost-based formula: “the pricing of any waste disposal by UUW (or, since 2001, UUI)

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118 *Napp*, cited above, at [392].
119 At [392].
120 Fax to Ofwat dated 26 February 2002 from Eversheds, acting for UU.
will depend on the prevailing market conditions at the time." In September 2004 it told Ofwat that “a sales representative will approach a prospective customer regarding a waste stream and typically would try to obtain a sample of that waste to bring back for technical assessment. Based on the information derived from this assessment, we will establish a base treatment or disposal cost, and then add an allowance for transportation. This would give the representative an idea of the cost of disposal for the specific waste in question with which to provide a quote to such a customer.” UU also told Ofwat that it has no internal documentation explaining the basis on which prices are set.

175. Ofwat has used the information supplied by UU to break down the costs of treating landfill leachate at UUW’s WWTW for the purposes of comparison and to assess whether prices are excessive.

176. According to information provided by UU during the course of Ofwat’s investigation, Bioprocessing’s charge for the treatment of tankered liquid waste at its WWTW can be broken down into the following elements.

a) The Mogden formula is used to calculate the cost of treating a cubic metre of trade effluent in a WWTW (see annex three). When industrial wastewater is sent to foul sewer there will be a trade effluent charge. This is a regulated activity and Ofwat regulates the cost of treating trade effluent disposed to sewer. The Mogden formula calculates the amount a receiving WaSC can charge to recover the cost of carriage to and treatment in its treatment plants (WWTW). The scale of this charge depends on set factors, coupled with the measured "strength" and quantity of the received effluent.

b) An additional amount is charged for the treatment of ammonia in kilograms per litre (kg/l) and is charged at £[...]/kg.

c) The remainder of the price covers overhead, profit and an amount for additional services. These additional services are, according to UU:

- Managing the waste management licence;
- Sampling all new and existing wastes;
- Providing technical expertise on waste treatment;
- Procuring transport services;
- Project managing capital projects for storage and safe transfer of waste streams; and

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122 Letter to Ofwat dated 29 September 2004; see also letters to Ofwat from UU of 4 February 2002 and 30 January 2003
123 In a letter dated 29 September 2004.
125 Letter from Eversheds to Ofwat dated 4 February 2002 (second letter of that date).
• Training staff to receive tankers.
• Preparing and monitoring procedures to ensure tankers do not contaminate the WWTW.

177. According to UU\(^{126}\) “UUW [the owner of Bioprocessing until April 2002] does not attribute a cost to different elements of the services described.”

**COST OF TREATMENT**

178. UU has told Ofwat\(^{127}\) that “the cost of treatment is a consideration in setting the price and is relevant to the internal charge made by the appointed business to Bioprocessing for waste water treatment.”

179. The full amount billed to landfill leachate customers is the price per cubic metre multiplied by the total number of cubic metres received added to the number of tankers multiplied by the tanker reception charge\(^{128}\). Any charge made by UU for tankering is charged separately\(^{129}\).

**OVERHEADS**

180. To calculate the components of the price charged by Bioprocessing for the treatment of landfill leachate it is necessary to break down Bioprocessing’s overhead costs based on the amount of liquid waste treated over three financial years. These results are illustrated in table three, per cubic metre of liquid waste. Since liquid waste is added at the inlet of the WWTW for aerobic treatment, along with waste received by sewer, there should be no significant difference in the capital or operational costs of treatment between these types of liquid waste.

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\(^{126}\) Letter from Eversheds to Ofwat dated 30 January 2003.
\(^{127}\) Letter from Eversheds to Ofwat dated 26 February 2002.
\(^{128}\) Charged per tanker received at the works.
\(^{129}\) Except in the case of Arpley as set out in the discrimination section below.
Table three: Average costs of treatment of one cubic metre of landfill leachate by financial year

<table>
<thead>
<tr>
<th>Year</th>
<th>Total tankered waste treated in m³</th>
<th>Costs of Sale ¹³⁰</th>
<th>Average costs of Sale per m³</th>
<th>Other overhead</th>
<th>Average other overhead per m³</th>
<th>Unallocated overheads</th>
<th>Average unallocated overheads per m³</th>
<th>Total average cost to UU per m³</th>
</tr>
</thead>
<tbody>
<tr>
<td>98/99</td>
<td>[…]</td>
<td>[…]</td>
<td>[…]</td>
<td>[…]</td>
<td>[…]</td>
<td>[…]</td>
<td>[…]</td>
<td>[…]</td>
</tr>
<tr>
<td>99/00</td>
<td>[…]</td>
<td>[…]</td>
<td>[…]</td>
<td>[…]</td>
<td>[…]</td>
<td>[…]</td>
<td>[…]</td>
<td>[…]</td>
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<tr>
<td>00/01</td>
<td>[…]</td>
<td>[…]</td>
<td>[…]</td>
<td>[…]</td>
<td>[…]</td>
<td>[…]</td>
<td>[…]</td>
<td>[…]</td>
</tr>
</tbody>
</table>

Source: Data provided by UU in response to s.26 notices sent to Ofwat dated 4 February 2002 and 6 March 2003.

181. UU confirmed in a letter dated 29 September 2004 that the assumptions used to calculate the figures in table three are correct. However, it is important to note that the figures are average costs of sale and overhead per cubic metre. Additional information ¹³¹ provided by UU states that there are a number of cost savings to Bioprocessing in the case of bulk customers, including:

1) “Daily composite samples – where 10 trucks contain the same load, there may be no need to analyse fully every truck load.
2) Cheaper tankering quotes.
3) Administrative savings – booking 10 tankers from a site with the same haulier takes the same time as it does to book 1 tanker.
4) Invoicing – only 1 invoice is required for a single large volume which might otherwise be comprised of several different jobs from different sites.”

182. These factors are likely to mean that the above estimates exaggerate the costs of treating large volumes of leachate (i.e. that they underestimate the profit margin) and underestimate the costs of treating small volumes of leachate (i.e. that they over-estimate the profit margin).

ADDITIONAL SERVICE CHARGE

183. The final element of the price charged covers the additional services provided by Bioprocessing. However, as stated above, UU does not cost each of these services separately.

¹³⁰ Excluding the amount shown in UU’s internal management accounts as a recharge (tab 2 of file 2 provided to Ofwat on 6 March 2003). Cost of sale represents cost to Bioprocessing of providing a service to tankered liquid waste customers, it includes elements such as materials and consumables (e.g. cleaning, fuel and security and contracts with third parties such as tankering and waste disposal).
¹³¹ Provided by email on 1 November 2004.
184. The cost to UU of treating landfill leachate (including treatment of the waste and any ammonia and tanker reception) represents a small part of the total charge made to customers. UU stated that it offers additional services as part of its waste management package. UU said that it was unable to quantify these services in terms of the price it charges to customers. In the s.26 response dated 30 January 2003, UU’s solicitors explained that “Bioprocessing sets its prices having regard to its costs and the risk it assumes, but not exclusively on that basis.”

Comparison of UU’s prices for the treatment of landfill leachate with the prices it charges in other markets

185. The treatment of tankered landfill leachate constitutes a market in its own right. As each type of waste has different chemical content and strength, there are a large number of different cost considerations. It is not therefore possible in any meaningful way to compare the prices UU charges for the treatment of tankered landfill leachate with the prices it charges for other types of tankered waste. As a result of this, we have not analysed any of the prices charged by UU for the treatment of other, non-leachate, forms of tankered waste. In addition, since no other WaSC operates in UU’s appointed area it is not possible to compare the prices charged for the treatment of tankered landfill leachate with comparable operators in the same geographic market.

Comparison of UU’s prices charged for the treatment of tankered landfill leachate with those of its competitors

186. Table four sets out the range of prices charged to landfill sites by UU, neighbouring undertakers and competing ITW. These are the total prices charged to customers without overheads or costs removed.

Table four: Actual price range charged to landfill leachate customers in 2001

<table>
<thead>
<tr>
<th>Company</th>
<th>Range of actual prices charged for the treatment of landfill leachate(^{132})</th>
</tr>
</thead>
<tbody>
<tr>
<td>UU</td>
<td>£[...]/m(^3)</td>
</tr>
<tr>
<td>SVT</td>
<td>£[...]/m(^3)</td>
</tr>
<tr>
<td>YKS</td>
<td>Unknown(^{133})</td>
</tr>
<tr>
<td>NNE</td>
<td>£[...]/m(^3)</td>
</tr>
<tr>
<td>Biffa</td>
<td>£[...]/m(^3)</td>
</tr>
<tr>
<td>Neston</td>
<td>£[...]/m(^3)</td>
</tr>
<tr>
<td>Lanstar</td>
<td>£[...]/m(^3)</td>
</tr>
</tbody>
</table>

\(^{132}\) Where there is no range shown only one price is charged because either there is only one customer, or the figure given is an average or the treatment works only treats a particular strength of leachate.

\(^{133}\) YKS does not operate its WWTW (Until 2002 the WWTW were operated by WRG). Therefore, it was unable to supply details of prices charged for the treatment of landfill leachate.
<table>
<thead>
<tr>
<th>Company</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shanks</td>
<td>£[…]/m³</td>
</tr>
<tr>
<td>Onyx</td>
<td>£[…]/m³</td>
</tr>
<tr>
<td>Castle Environmental Ltd.</td>
<td>£[…]/m³</td>
</tr>
<tr>
<td>(&quot;Castle&quot;)</td>
<td></td>
</tr>
</tbody>
</table>

Source: Information for ITWs was taken from responses to a s. 26 issued by Ofwat dated 2 July 2002 and for Bioprocessing from a response to s. 26 notice issued by Ofwat dated 19 December 2002. The information for SVT, YKS and NNE is taken from responses to Ofwat’s s.26 notice dated 11 November 2002.

187. UU’s prices are broadly in the same range as that of its competitors. However, it is not meaningful to compare UU’s costs of treatment for landfill leachate with those incurred by most ITW’s. This is because UU treats leachate using biological treatment to a standard for final discharge, whereas most ITWs use chemical or physical treatment to treat waste to a standard that can be disposed to sewer. ITWs are unable to provide Ofwat with information on their costs of treating landfill leachate as they treat many types of effluent and they do not have accounting costs detailed by type of effluent treated.

188. Biffa is the only waste management company similar to Bioprocessing that uses a WWTW owned by a WaSC to process the tankered waste that it accepts. In Biffa’s arrangement with Severn Trent, it pays the Mogden cost of treatment to the WaSC to cover the costs of adding the tankered waste to the inlet of the WWTW. Ofwat has compared the prices, overhead costs and profit margin of Biffa and Severn Trent with those of Bioprocessing and UU, and they are not significantly different. While this is limited evidence against excessive pricing by UU, it certainly offers no support for it.

189. Information provided by UU and its competitors indicates that customers are often won and lost on price terms, suggesting a considerable amount of price competition, at least for customers that can plausibly threaten to switch or which UU cannot be confident will not switch. One ITW stated that it did not treat more leachate during the relevant period because “customers secured volumes at more competitive rates”. Another ITW stated that it could have treated more leachate but that it “was not competitive at the rates quoted.”

190. An undertaking’s price can be considered excessive if it is able to sustain high (supra-normal) profits. If there is no new entry into the market or innovation leading to efficiency and excessive prices persist then supra-normal profits may exist.
191. In Napp\textsuperscript{134} the DGFT found, that Napp was charging excessive prices, partly on the basis that Napp’s gross margin was found to be in excess of 10% higher than its closest competitor.

192. Table five illustrates Bioprocessing’s end of year operating profit for the financial years between April 1998 and March 2002. The percentage operating profit shows a consistent percentage of profit over four financial years and a continuous increase for turnover and profit.

Table five: Total Turnover, overheads and operating profit for Bioprocessing between 1998 - 2002\textsuperscript{135}

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Turnover</th>
<th>Cost of Sale</th>
<th>Other Overhead</th>
<th>Subtotal</th>
<th>Operating profit</th>
<th>Percentage operating profit</th>
</tr>
</thead>
<tbody>
<tr>
<td>1998 - 1999</td>
<td>[…]</td>
<td>[…]</td>
<td>[…]</td>
<td>[…]</td>
<td>[…]</td>
<td>[…]</td>
</tr>
<tr>
<td>1999 - 2000</td>
<td>[…]</td>
<td>[…]</td>
<td>[…]</td>
<td>[…]</td>
<td>[…]</td>
<td>[…]</td>
</tr>
<tr>
<td>2000 - 2001</td>
<td>[…]</td>
<td>[…]</td>
<td>[…]</td>
<td>[…]</td>
<td>[…]</td>
<td>[…]</td>
</tr>
<tr>
<td>2001 - 2002</td>
<td>[…]</td>
<td>[…]</td>
<td>[…]</td>
<td>[…]</td>
<td>[…]</td>
<td>[…]</td>
</tr>
</tbody>
</table>

Source: s.26 response from UU dated 6 March 2003

193. UU’s breakdown of unallocated costs dated 28 September 2001\textsuperscript{136} for the Bioprocessing business concludes, “the estimated cost of unallocated overhead for the Bioprocessing business is £[…] p.a. This level of overhead represents 8% of Bioprocessing’s total costs”. Using this estimate would reduce UU’s percentage operating profit to […]% in the years ending 1999 and 2000, […]% in the year ending 2001 and […]% in the year ending 2002. The document also states that “it would take significant resources to determine accurately the true cost of overheads for the Bioprocessing Business. Furthermore, it is unlikely that these overhead costs to Service Delivery would reduce if Bioprocessing ceased operating. Therefore there is little benefit in carrying out a detailed analysis.”

194. Table six shows UU’s percentage operating profit as calculated in table five compared with competing ITW in size order by year. Unallocated overheads are deducted for UU and the figures are shown in brackets.

\textsuperscript{134} Napp Pharmaceutical Holding Ltd CA98/2/20001 (2001) UKCLR 597.
\textsuperscript{135} The figures for costs of sale and other overheads in 2000-2001 and 2001-2002 are not available, due to a change in format of the accounts during these years.
\textsuperscript{136} Eversheds response of 30 January 2003 to a s.26 notice issued by Ofwat dated 19 December 2002.
Table six: Operating profit between the financial years 1999 and 2003\textsuperscript{137} in size order

<table>
<thead>
<tr>
<th>Year ending 1999</th>
<th>Company</th>
<th>Percentage operating profit</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>UU</td>
<td>[...]</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year ending 2000</th>
<th>Company</th>
<th>Percentage operating profit</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>UU</td>
<td>[...]</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year ending 2001</th>
<th>Company</th>
<th>Percentage operating profit</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>UU</td>
<td>[...]</td>
</tr>
<tr>
<td></td>
<td>Biffa</td>
<td>[...]</td>
</tr>
<tr>
<td></td>
<td>Castle (Sheffield)</td>
<td>[...]</td>
</tr>
<tr>
<td></td>
<td>Castle (Stoke)</td>
<td>[...]</td>
</tr>
<tr>
<td></td>
<td>Lanstar</td>
<td>[...]</td>
</tr>
<tr>
<td></td>
<td>Shanks</td>
<td>[...]</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year ending 2002</th>
<th>Company</th>
<th>Percentage operating profit</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>UU</td>
<td>[...]</td>
</tr>
<tr>
<td></td>
<td>Lanstar</td>
<td>[...]</td>
</tr>
<tr>
<td></td>
<td>Castle (Stoke)</td>
<td>[...]</td>
</tr>
<tr>
<td></td>
<td>Castle (Sheffield)</td>
<td>[...]</td>
</tr>
<tr>
<td></td>
<td>Shanks</td>
<td>[...]</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year ending 2003</th>
<th>Company</th>
<th>Percentage operating profit</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Shanks</td>
<td>[...]</td>
</tr>
</tbody>
</table>

Source: Figures for ITW were taken from responses to a section 26 notice issued by Ofwat on 2 July 2002, which provided management accounts for the lowest possible accounting level for the liquid treatment element of each undertaking. The figures for UU are from its response to the s. 26 notice issued by Ofwat on 19 December 2002. The figures in brackets represent percentage profit minus unallocated overhead.

195. In \textit{Napp}, the Tribunal stated that “The fact that the [DGFT] has not chosen to rely on other comparators such as international price comparisons or returns on capital does not in our view lessen the force of the comparators upon which he does rely. Napp itself has not, in the notice of appeal, put forward any other comparators”\textsuperscript{138}

\textsuperscript{137} Not all undertakings were able to provide relevant data for the period specified.

\textsuperscript{138} Paragraph 401 Napp Pharmaceutical Holdings v DGFT.
196. Due to the differences in the methods used to treat leachate, the comparison of operating profits between UU and its competitors is difficult. Bioprocessing uses biological treatment at WWTWs, while all but two of the ITWs that operate in the North West use physical and chemical treatment, which is a different process and therefore incurs different costs. Ofwat has not analysed the costs of physical and chemical treatment; rather, it has focused on the cost of treatment at WWTW. ITWs have indicated\textsuperscript{139} that their overhead cost of treating landfill leachate was high, compared to the prevailing market price.

197. An additional complication is that the different companies may report operating profit using different assumptions; this creates some uncertainty when conducting comparisons.

198. In \textit{Napp}, there was a minimum of 10\% difference between Napp's profit and that of its closest competitor. In UU's case in 2001, there is a gap of [...]\% between UU's percentage operating profit and its closest competitor (Biffa Waste Services). However, in 2002 UU's profits decreased to […]\%, which is the same as Biffa's profit in 2001.

199. On the basis of the evidence he has obtained, therefore, the Director does not consider that he has sufficiently strong evidence of a persistent and marked difference between UU's profits and that of its closest competitor to serve as the basis for a statement of objections under rule 4 of the OFT's Rules. This is especially true given some of the uncertainties in the comparability of the profit data.

200. It is also the case that great caution has to be used in comparing the profits of UU\textsuperscript{140}, which uses biological treatment at a WWTW, with the profit of an ITW using different treatment methods and on a smaller scale. The evidence collected during the course of the investigation indicates that a large part of the difference in profit margin between UU and ITW was due to efficiency and economies of scale on the part of UU. The OFT guideline\textsuperscript{141} states that “undertakings in competitive markets may be able to sustain supra-normal profits for a period if they are more efficient than their competitors and thus would not be acting in an anti-competitive manner” and that “this might be shown by the fact that other undertakings charging the same prices were not earning high profits relative to their costs of capital. In the long run, however, the initial advantages that led to supra normal profits would be incorporated into common practice if the market were truly competitive.” In this case, it is entirely possible that the advantages that have led to high profits for UU are the regulated assets of the appointed business; these cannot be incorporated into competitors’

\textsuperscript{139} Responses to a s.26 dated 1 July 2003.
\textsuperscript{140} and Biffa, which uses Severn Trent's WWTWs
\textsuperscript{141} OFT 414 (1999) Assessment of Individual Agreements and Conduct, paragraph 2.9.
business practice as it is not possible to recreate those assets for other businesses (there being only one appointed sewerage undertaker for each appointed area). For example biological treatment only becomes profitable at large scale treatment works.

201. Other developments in the market are also relevant for assessing profitability. As far as the Director is aware, there has been no significant entry or exit by ITWs (other than works operated by landfill sites) on the market for the treatment of landfill leachate in the past few years. The amount of leachate which requires treatment has been declining in recent years, mainly due to the restriction on the landfill of liquids under the 2000 Regulations. However, demand for treatment has so far been sufficient to avoid market exit by ITWs.

202. In the last few years a number of landfill site operators have built LTPs to discharge treated landfill leachate directly to sewer. This change is stimulated by the changes in regulation and the high transport costs of tankering landfill leachate. The building of LTPs is likely to have had an effect on Bioprocessing’s profits. Whilst the amount of leachate requiring treatment is declining, existing leachate still requires treatment. UU\textsuperscript{142} has demonstrated that over the last two years it has lost seven of its 23 landfill leachate customers as onsite LTPs have been built. UU has lost two further customers to other treatment competitors. In addition, a number of sites have closed\textsuperscript{143} or ceased to tanker waste. UU now has eight permanent customers and three customers that occasionally tanker landfill leachate.

203. The change in the structure of this market and the competitive pressure exerted by onsite LTPs indicates a degree of competition in the market. UU made profits of [...]% and [...]% in 2000 and 2001 respectively. In 2002, this dropped to [...]%. With the loss of customers to LTP, Bioprocessing’s profitability may have fallen further since 2002. Whilst UU’s profits in 2001 peaked at [...]% this is still only [...]% higher than its closest competitor and does not provide sufficient evidence of excessive pricing.

\textbf{Conclusion on excessive pricing}

204. UU’s profit margin appears to be larger than that of most of its competitors. However this is not in the circumstances of this case strong evidence of excessive pricing because there are a number of difficulties in comparing profits between the firms in the market, and it remains entirely possible that UU’s larger profit margin is due to its position as the only supplier able to

\textsuperscript{142} In an email to Ofwat dated 1 November 2004.

\textsuperscript{143} Whilst closed sites no longer accept waste they do occasionally need to remove small amounts of leachate as the decomposition process occurs.
carry out biological treatment (except for two ITWs). Further, the difference between UU and its closest competitor in 2001 was only […]%.

205. UU’s actual prices for the treatment of landfill leachate do not appear to be significantly different from those charged by its competitors. Again due to difference in methods of treatment used the comparison of prices is difficult to make.

206. The Director therefore has insufficient evidence to support QWM’s allegation that UU is charging excessive prices to serve as the basis for a statement of objections.

PRICE DISCRIMINATION

207. Although QWM’s complaints relating to price discrimination were mainly based on discrimination by UU as between prices charged to QWM and prices charged internally to Bioprocessing (dealt with in the section on “Margin Squeeze” below), Ofwat also investigated the extent to which differential pricing of UU’s services to landfill operators could constitute an abuse.

208. Differential pricing is not automatically an abuse of dominance. The OFT guideline, states that “for price discrimination to be feasible an undertaking not only has to be able to segment the market in some way, but has to be able to enforce the segmentation”. The guideline also states that “The Director General considers price discrimination to be an abuse only where there is evidence that prices were also excessive or that the discrimination was used to reduce competition significantly.”

209. Two issues need to be distinguished.

210. First, it is plainly not an abuse for a dominant company to charge different prices if those different prices are based on different costs. So the question that arises is whether differences in pricing are cost-justified.

211. Secondly, even where differences in prices are not cost-justified, it does not necessarily follow that there is an abuse even where, as here, the dominant undertaking enjoys a very large share of the market. It needs to be considered whether the price discrimination has, or is intended to have, an anti-competitive effect on competition in the market in which the dominant undertaking is dominant (e.g. by excluding competitors from the market).

144 OFT 414, September 1999, the guidance in force at the time.
145 OFT 414, September 1999, the guidance in force at the time.
146 The discrimination could also have an effect on competition in other markets (for example, if different charges to different customers distorts competition as between those customers on the
212. As a particular example of such abusive price discrimination, the case-law shows that one example of price discrimination that is abusive consists of selective price cutting by a dominant undertaking with the aim of eliminating competition. See, for example, the Opinion of Advocate General Fennelly in *Compagnie Maritime Belge*[^147]: “normally, non-discriminatory price cuts by a dominant undertaking which do not entail below-cost sales should not be regarded as being anti-competitive. In the first place, even if they are only short-lived, they benefit consumers and, secondly, if the dominant undertaking's competitors are equally or more efficient, they should be able to compete on the same terms. Community competition law should thus not offer less efficient undertakings a safe haven against vigorous competition even from dominant undertakings. Different considerations may, however, apply where an undertaking which enjoys a position of dominance approaching a monopoly, particularly on a market where price cuts can be implemented with relative autonomy from costs, implements a policy of selective price cutting with the demonstrable aim of eliminating all competition. In those circumstances, to accept that all selling above cost was automatically acceptable could enable the undertaking in question to eliminate all competition by pursuing a selective pricing policy which in the long run would permit it to increase prices and deter potential future entrants for fear of receiving the same targeted treatment.”

213. The OFT guideline Assessment of Individual Conduct[^148] states that “When considering whether price discrimination is an abuse, it is often relevant to consider whether the pricing structure in question allows the efficient recovery of fixed costs and expands demand substantially or opens up new market segments. For example, undertakings often have fixed costs of production (costs which do not vary directly with output, at least in the short run). This means that they will usually need to set at least some prices above their average variable costs to generate sufficient revenues to break even (i.e. earn normal profit). In this case, price discrimination can be beneficial if it leads to a sufficiently large increase in output in relation to the output level that would have pertained if there were no price discrimination. Indeed, in some cases price discrimination may allow a new market segment to emerge. This might occur, for example, in industries characterised by relatively high fixed costs, where customers can be split up into groups according to their willingness to pay, and where groups with low willingness to pay would not buy in the absence of price discrimination.”

[^148]: OFT draft Guideline April 2004, OFT 414a, paragraph 3.6 – 3.7.
Are UU’s differential prices cost justified?

214. As set out in paragraphs 173 to 177, the information provided by UU during the course of this investigation shows that its prices are not entirely cost justified. Although when setting its prices UU does take account of the Mogden cost of treatment, as set out in paragraph 173a and annex three, (it considers costs such as ammonia and transport) UU does not apply an internal cost to every element of the treatment and disposal process. UU told Ofwat\(^{149}\) that “UUW does not attribute a cost to the different element of the services described. As is clear from UUW’s response to paragraph 8, it is not simply cost which influences Bioprocessing’s prices, but the assumption of risk, the existence of competing means of waste disposal and competition from other waste management companies.”

215. UU charges different prices to different customers for the treatment of landfill leachate within a range from £[...] to £[...]/ m\(^3\). Adjustment is made for strength; however other differences in price require explanation. Ofwat investigated these aspects of the pricing strategy.

216. In a response to a section 26 notice\(^{150}\) UU stated that; “Prices can vary for the following reasons

1) the cost of transport can vary due to, for example, i) fluctuations in the price of diesel fuel or ii) because Bioprocessing buys in transport, suppliers will quote according to the length of the assignment (i.e. short term is more expensive) and the amount of prior notice given (i.e. urgent is more expensive)

2) Mogden costs are reviewed annually by Ofwat.

3) Finally, prices vary as part of the normal commercial negotiation with prospective customers."

217. In response to UU’s point (1) above this investigation has focused on the cost of treatment and not the cost of tankering. In most cases UU charges separately for tankering; however where it offers an “all in” price the cost of tanker hire may influence the price offered to the landfill site. However in general this cost justification is not applicable when considering the price UU changes for the treatment of tankered landfill leachate.

218. UU’s point (2) refers to Ofwat’s review of the Mogden formula (described at paragraph 166a and annex three). The Mogden formula is a factor in the cost of treating landfill leachate as it allows the WWTW to assess the individual cost of treating the leachate in question. Therefore the Mogden cost of treatment for strong waste will be different to that of weak waste; so that in UU’s case the Mogden cost of treatment for landfill leachate varies between £[...]/m\(^3\) and £[...]/m\(^3\). As set out in annex four this does clearly


\(^{150}\) Dated 29 September 2004.
account for some of the differences in the prices charged for the treatment of landfill leachate by UU.

219. In addition to the differences in price as a result of differing strength leachate calculated using the Mogden formula, there are additional differences such as volume, location and contractual obligations that are responsible for differences in price. It is therefore difficult for UU to use a uniform price structure given the differences in costs between customers.

**Do UU’s differential prices intend to eliminate or affect competition?**

220. As previously set out differential pricing that is not cost justified is not necessarily an abuse unless there is intent to eliminate competition or the pricing has adversely affected or is likely to affect new entry or competition within the relevant market.

221. As part of its consideration of intent, Ofwat asked, as part of the section 26 requests made during its investigation, for all internal emails, papers and all external papers and correspondence dealing with QWM, landfill leachate customers and how UU reached its prices for the treatment of landfill leachate. Ofwat examined those documents carefully for evidence of exclusionary intent.

222. There is evidence (set out below) that UU is offering above-cost selective discounts to some of its customers. However these customers are those that are planning to leave the market entirely to build LTPs; therefore the discounts are aimed at retaining the customers in the market rather than eliminating competition (indeed, it is hard to see how UU could expect to “eliminate” this option for landsite operators). There is no convincing evidence that customers that are vulnerable to competition from other competitors are being charged lower prices; this is dealt with in more detail below.

223. Between January 1998 and November 2001 UU received tankered landfill leachate from 23 landfill sites. Of these, seven landfill sites were charged less than £[…]/m³; nine sites were charged between £[…]/m³; five were charged £[…]/m³ and two sites were charged more than £[…]/m³. The details of this analysis are attached at Annex four.

224. For the seven sites charged £[…] or less, all were landfill operators with more than one site. In all cases the site was also planning to build an onsite treatment works or could easily tanker the waste to another treatment provider. UU provided documentation including letters and notes of meetings or telephone conversations in which UU negotiated price with the landfill operators.
225. For example, for landfill sites, Bennet Bank, Dark Lane and Pen Y Bont UU stated in an internal email dated 3 November 2000 that “[…].” The lower price meant that UU made less profit; however since the price was not below average variable costs and there is no evidence that UU has used lower pricing to eliminate competition, this cannot said be to be predatory.

226. In addition, all of the sites charged £[...] or less tanker large volumes of waste and as set out at paragraph 170 there are cost savings for UU if its customers tanker large amounts of leachate. UU still receives as of November 2004 leachate from five of the seven sites it charged £[...]/m³ or less.

227. In the case of the nine sites charged between £[...] and £[...]/m³ there is evidence of some bargaining power on the part of the customer, but not as much as those sites that are charged less than £[...]/m³. For example both Arpley and Gowy are close to UU WWTW and have high strength waste, but due to bargaining they were able to reduce the prices charged by UU. For example, Arpley was charged a price of £[...]/m³ for the treatment of landfill leachate, which fell to £[...]/m³ over time; this does not appear to be due to changing strengths of leachate. Of the nine customers charged within this price range by November 2004 only three still tankered leachate to UU, three had built LTPs, two had shut and one had been lost to a competitor.

228. In the case of the five sites charged £[...] to £[...]/m³, there is little evidence of negotiation. This is likely to be because […], although information shows that in some cases negotiation did occur after November 2001 and prices have subsequently reduced. This fits with the increasing trend for landfill sites to build onsite treatment facilities and the Environment Agency’s preference to have waste disposed to sewer. Of the landfill sites charged this price, only one still tankers small amounts of leachate to UU, the other four sites built LTPs.

229. Two sites are charged more than £[...]/m³. […] is charged the higher price of £[...]/m³. When we asked UU about this price it stated¹⁵¹ “As far as […] is concerned, UUI has a long standing relationship with this customer. […] has been happy to deal with UUI on the basis of the price it quotes and, in particular, the service it provides. Customer service is particularly important in the market. For example, where there are urgent requests UUI believes it has always been able to respond in a time that has satisfied the customer.” […] produces small amounts of low strength waste and as stated in paragraph 164 Ofwat’s analysis might over-estimate the profit margin on low-volume customers. […] also has five other treatment providers within a thirty-mile radius; therefore, if it was unhappy with the price it has the option to change its treatment provider. The other site has

¹⁵¹ In an email to Ofwat dated 1 November 2004.
strong waste which is expensive to treat and has now built an onsite treatment works.

Conclusion on discriminatory pricing

230. The evidence shows that UU’s prices are not entirely cost justified, however some elements of UU’s prices are based on cost.

231. However there is no convincing evidence to suggest UU’s differential prices had an exclusionary effect or intent. There is no systematic evidence that Bioprocessing has been pricing higher to customers with few treatment alternatives and lower to customers with many treatment alternatives. And Ofwat’s examination of the extensive internal documentation provided by UU did not produce any clear evidence of exclusionary intent; the importance of a finding of exclusionary intent (“demonstrable aim of eliminating all competition”) in the context of above-cost selective discounting was emphasised by the Advocate General in Compagnie Maritime Belge v. Commission.\(^{152}\)

232. UU’s ability to price discriminate is constrained by competition for the business of landfill sites. Several of the customers paying higher prices have several alternative treatment providers available which they could switch to if UU attempts to price too highly. Several customers have built on-site treatment works and now send their landfill leachate straight to sewer. It is notable that four of the five landfill sites paying between £[…]/m\(^3\) and £[…]/m\(^3\) have now built their own on-site treatment works.

233. The Director therefore does not consider that he has sufficient evidence to show that UU was at the material time price discriminating in such a way as to abuse its dominant position.

PREDATORY PRICING/MARGIN SQUEEZE IN RELATION TO QWM

234. In letters dated 17 December 2001 and 3 January 2002, QWM alleged, in essence, that UU acted to exclude it from the market for tankering and arranging treatment of landfill leachate by offering its customer, WRG, a lower price. The market for tankering leachate and arranging treatment of leachate is, it will be assumed for the purposes of this part of the argument, a separate but related market to the market for the treatment of tankered landfill leachate.

History of Conduct

\(^{152}\) Case C-395/96P, [2000] ECR I-1365, at §132, quoted in full at paragraph [195] above; in that case, exclusionary intent was effectively admitted by the defendant undertakings (§119).
235. The pricing information UU has supplied to Ofwat\textsuperscript{153} dates from May 1998. In May 1998, UU received and treated tankered landfill leachate from two WRG landfill sites; Buckley and Gowy. UU also tankered the landfill leachate. Buckley was charged £[...] m\textsuperscript{3} for tankering and £[...] m\textsuperscript{3} for treatment, Gowy was charged £[...] m\textsuperscript{3} for tankering and £[...] m\textsuperscript{3} for treatment.

236. On 29 July 1999, a quote was sent by UUW to WRG offering a price of £[...] m\textsuperscript{3} for tankering and treatment of landfill leachate from Arpley. In August 1999 UU started to tanker and treat landfill leachate from Arpley. However, due to a change in the strength of the waste sampled compared to the original quote, it charged £[...] m\textsuperscript{3} (including £[...] m\textsuperscript{3} for tankering and £[...] m\textsuperscript{3} for treatment)\textsuperscript{154}.

237. In February 2000, NDS won from UU the business of tankering WRG’s leachate. Under its agreement with WRG, NDS also took responsibility for arranging treatment of the leachate, charging WRG a single fee (including profit) for tankering and treatment. NDS then sub-contracted the treatment of WRG’s leachate to UU. In relation to the remaining site, Arpley, it tankered some of the leachate itself and sub-contracted to Unifleet (part of the UU group) the tankering of the remaining leachate. UU charged NDS £[...] m\textsuperscript{3} for treatment of the Arpley leachate which NDS tankered, and £[...] m\textsuperscript{3} (including tankering costs) for treatment of the Arpley leachate tankered by Unifleet.

238. In March 2000, QWM commenced trading using NDS tankers and began to tanker landfill leachate from WRG sites. UU charged QWM a lower price than it had charged NDS, namely £[...] m\textsuperscript{3} for leachate from Arpley when using Unifleet tankers and £[...] m\textsuperscript{3} for leachate from Arpley when using QWM tankers. QWM was also charged £[...] m\textsuperscript{3} for treatment of leachate from Brookhill and £[...] m\textsuperscript{3} for the treatment of leachate from Buckley. According to QWM, it was able to obtain lower treatment prices than those previously offered to NDS because QWM was able to threaten UU with the possibility of switching treatment supplier to Hyder Ltd in North Wales (then not owned by UU). In April 2000, QWM started to tanker landfill leachate from another WRG site, Gowy to UU’s WWTWs. For that, QWM was charged £[...] m\textsuperscript{3} for treatment by UU\textsuperscript{155}.

239. During 2001, QWM continued the above arrangements but also tankered small amounts of leachate from WRG landfill sites Arpley, Taddington and Rigby to Neston Tank Cleaners (an ITW) near Merseyside. Neston

\textsuperscript{153} Letter to Ofwat dated 4 February 2002.
\textsuperscript{154} This is a higher price than was quoted as the landfill leachate was stronger than that originally quoted for.
\textsuperscript{155} The information provided in this paragraph is from Ofwat’s analysis of information provided by UU, in a section 26 response dated 4 February 2002.
charged £[…]m³ for the treatment and disposal of landfill leachate from the sites in question. UU told Ofwat\textsuperscript{156} that in Summer/Autumn 2001 QWM switched eight loads of WRG leachate a day from UU’s WWTW at Davyhulme, transferring those loads to ITWs owned by Neston and Onyx\textsuperscript{157}. However the information provided by Neston and Onyx shows that between September 2001 and December 2001 QWM tankered landfill leachate from WRG sites amounting to 105 loads to Neston and 22 loads to Onyx. During the same period QWM also tankered 50 – 150 loads per month to WWTW operated by UU\textsuperscript{158}.

240. A letter dated 8 October 2001 from Bioprocessing to WRG provided quotes from UU to treat landfill leachate from WRG’s sites at Llandulas (£[…]m³) and Rigby (£[…]m³); tankering was not included in those quotes. At this time UU was charging QWM £[…]m³ for disposal of Rigby leachate so that, at disposal rates at the time, Bioprocessing’s quote represented a saving of approximately £[…]month to WRG compared with what QWM was charging WRG. QWM charged £[…]m³ for the tankering and disposal of its leachate (this is based on £[…]m³ for treatment, £[…]m³ for tankering and £[…]m³ profit).

241. On 23 November 2001, UU wrote to WRG following a meeting between Bioprocessing and WRG on 8 November 2001. UU said that by redistributing treatment capacity across its existing business, WRG would be able to save £[…] a year on leachate produced at the Gowy and Llandulas sites alone. UU could do this by changing the works that receive waste in order to expand its capacity at a particular WWTW, thus reducing tankering costs. UU said it would also assist WRG with trade effluent consents issued by Dŵr Cymru and at its Kendall Fell Quarry landfill site in UU’s area. UU also provided a quote for the treatment and tankering of landfill leachate from WRG’s landfill sites at Arpley, Gowy, Llandulas, Rigby and Taddington. The prices in the quote are set out in table 8 below and are compared with QWM’s last known prices. A UU document entitled “WRG proposed treatment prices”\textsuperscript{159} states that “suggested prices [for WRG] […] are based on Quantum’s prices with a 2.5% discount.”

242. On 18 December 2001, QWM emailed WRG saying that QWM would alter the charges for the tankering and treatment of Taddington and Rigby landfill leachate.

\textsuperscript{156} Letter from UU dated 4 February 2002.
\textsuperscript{157} Letter dated 4 March 2002 from Eversheds.
\textsuperscript{158} The information provided in this paragraph is from Ofwat’s analysis of information provided by UU, in a section 26 response dated 4 February 2002.
\textsuperscript{159} Part of a s. 26 response to UU dated 13 February 2002.
243. A further email from QWM to WRG on 20 December 2001 offered a reduction of £[...]/tonne for Taddington leachate and £[...]/tonne for Rigby leachate.

244. On 17 January 2002, QWM lost the Taddington business to UU and on 17 March 2002, QWM lost the Gowy and Arpley business to UU\(^\text{160}\). QWM lost the Rigby business to another treatment provider.

245. On 20 March 2002, an email from QWM to WRG offered a revised charge of £[...]/tonne for landfill leachate (transport and treatment) from Rigby and Arpley. This is £[...] cheaper than the price quoted by UU. WRG did not take up this offer.

246. On 12 April 2002, an email from QWM offered a price of £[...]/tonne (transport and treatment) for landfill leachate from Arpley. WRG did not take up this offer.

247. QWM ceased to trade during September 2003. Table seven illustrates QWM’s profits during the three years in which it operated in the landfill leachate market. The figures for 2002 show that once it lost the WRG business to UU it began to make a loss.

Table seven: QWM’s turnover and profit between 2000 and 2002

<table>
<thead>
<tr>
<th></th>
<th>2000</th>
<th>2001</th>
<th>2002</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales/Turnover</td>
<td>[...]</td>
<td>[...]</td>
<td>[...]</td>
</tr>
<tr>
<td>Cost of sales</td>
<td>[...]</td>
<td>[...]</td>
<td>[...]</td>
</tr>
<tr>
<td>Gross profit</td>
<td>[...]</td>
<td>[...]</td>
<td>[...]</td>
</tr>
<tr>
<td>Other overheads</td>
<td>[...]</td>
<td>[...]</td>
<td>[...]</td>
</tr>
<tr>
<td>Operating profit/(Loss)</td>
<td>[...]</td>
<td>[...]</td>
<td>[...]</td>
</tr>
<tr>
<td>Net Profit/(Loss)</td>
<td>[...]</td>
<td>[...]</td>
<td>[...]</td>
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</tbody>
</table>


**Prices and profit analysis**

248. Table eight compares the prices charged by QWM with those offered by UU in November 2001. The table shows that Bioprocessing’s prices were below QWM’s prices for four of WRG’s landfill sites.

Table eight: QWM’s charges to WRG compared with UU’s quote of November 2001

\(^{160}\) QWM has not tankered Llandulas leachate. Brookhill and Buckley tanker small amounts infrequently, therefore use different hauliers on an ad hoc basis. Both sites are now closed.
<table>
<thead>
<tr>
<th>Landfill site</th>
<th>QWM price</th>
<th>QWM Disposal cost</th>
<th>QWM Transport cost</th>
<th>QWM Profit(^{161})</th>
<th>UU price(^{162})</th>
<th>UU treatment price</th>
<th>Transport price</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arpley</td>
<td>[...]</td>
<td>[...]</td>
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<tr>
<td>Gowy</td>
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<tr>
<td>Llandulas</td>
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<tr>
<td>Rigby</td>
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<tr>
<td>Taddington</td>
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<td>[...]</td>
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</tbody>
</table>


249. In April 2001, Bioprocessing had charged the following prices to QWM for the treatment of landfill leachate from the four sites listed:

Table nine: Prices charged by UU to QWM in April 2001 minus cost of treatment calculated using the Mogden formula and overhead.

<table>
<thead>
<tr>
<th>Landfill site</th>
<th>Price/m³ for the treatment of landfill leachate</th>
<th>Cost of treatment</th>
<th>Total Overheads</th>
<th>Profit made by UU</th>
<th>Percentage Profit made by UU</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rigby</td>
<td>[...]</td>
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<tr>
<td>Arpley</td>
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<td>Taddington</td>
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<tr>
<td>Gowy</td>
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</table>

Source: s.26 response from UU dated 13 February 2002.

250. Table nine shows that UU made a profit on its treatment charges to QWM. Therefore, even after undercutting QWM, UU still made a profit. This demonstrates that UU was not pricing below average total cost.

\(^{161}\) QWM price minus QWM disposal cost and QWM transport cost.

\(^{162}\) UU price is the UU treatment price plus the Unifleet transport price; UU’s profit is included in its treatment price.
Table ten: A breakdown of Bioprocessing’s costs to find the average variable cost per m³ and average total cost per m³. All figures quoted are averages per month over the period January 1998 – November 2001.

<table>
<thead>
<tr>
<th>Site</th>
<th>Price (£)</th>
<th>Volume (m³)</th>
<th>Treatment costs (£)</th>
<th>Average treatment cost (£/m³)</th>
<th>Average cost of sale (£/m³)</th>
<th>Average variable cost (£/m³)</th>
<th>Average overhead cost (£/m³)</th>
<th>Average total cost (£/m³)</th>
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<tr>
<td>Arpley</td>
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<td>Gowy</td>
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<td>Rigby</td>
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<td>Taddington</td>
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</tbody>
</table>

Source: s.26 response from UU dated 13 February 2002.

Table eleven: A summary of UU’s prices and costs averaged over the period January 1998 - November 2001.

<table>
<thead>
<tr>
<th>Site</th>
<th>Price (£)</th>
<th>Average variable cost (£/m³)</th>
<th>Average total cost (£/m³)</th>
<th>Average unallocated cost (£/m³)</th>
<th>Average total cost including unallocated costs (£/m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arpley</td>
<td>[…]</td>
<td>[…]</td>
<td>[…]</td>
<td>[…]</td>
<td>[…]</td>
</tr>
<tr>
<td>Gowy</td>
<td>[…]</td>
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<tr>
<td>Rigby</td>
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<tr>
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</tbody>
</table>

Source: s.26 response from UU dated 13 February 2002.

251. Tables ten and eleven above illustrate that UU did not set price below average variable cost at any of the four sites operated by WRG. They also show that UU did not charge a price that was below average total cost in order to gain the WRG contract at QWM’s expense. Even when unallocated costs are taken into account, UU still maintains a profit margin. There is no breakdown of the costs of the additional services UU provide though they are unlikely to make a significant difference to the figures; this is because many of the costs of the additional services are included within the figures provided as overhead.

252. Table twelve shows that QWM made lower profits than UU due to higher costs faced by it. Therefore, QWM was not able to reduce its prices as far as UU was able to in order to compete with UU for the WRG business.

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163 There are no figures for cost of sale due to a change in the format of the accounts supplied by UU as part of a section 26 response dated 13 February 2002, cost of sale for Rigby and Taddington are included in the column labelled average overhead cost.

However the information set out above shows that QWM did try to offer WRG lower prices in order to compete with UU but that WRG did not take up the offer.

Table twelve: QWM’s price, costs and profits for the treatment of landfill leachate from WRG owned sites at the time of the loss of the business

<table>
<thead>
<tr>
<th>Location</th>
<th>QWM Price</th>
<th>QWM Costs</th>
<th>QWM Profit</th>
<th>Percentage profit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arpley</td>
<td>[...]</td>
<td>[...]</td>
<td>[...]</td>
<td>[...]</td>
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<tr>
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<tr>
<td>Taddington</td>
<td>[...]</td>
<td>[...]</td>
<td>[...]</td>
<td>[...]</td>
</tr>
</tbody>
</table>


253. UU has told Ofwat\textsuperscript{165} that any other haulier; ITW or broker would be charged on the same basis as QWM for treatment and disposal at UU’s works. UU has told Ofwat\textsuperscript{166} “If a third party with the appropriate skills, capability and technical knowledge wishes to negotiate access then UUW will willingly enter into negotiations and will not seek to discriminate between the third party and UUI.”

**Margin Squeeze**

254. QWM did not raise the issue of margin squeeze in its complaint. However given the nature of Ofwat’s investigation Ofwat gave some consideration to that issue in order to ensure that it had properly covered all of the issues in the investigation.

255. The OFT Guideline “Assessment of Individual Conduct”\textsuperscript{167} states that “a margin squeeze may occur in an industry where a vertically integrated undertaking is dominant in the supply of an important input for a downstream market in which it also operates. The vertically integrated undertaking could then harm competition by setting such a low margin between its input price (e.g. wholesale price) and the price it sets in the downstream market (e.g. retail price) that an efficient downstream competitor is forced to exit the market or is unable to compete effectively.”

256. To determine whether an efficient downstream competitor would make a normal profit, the test is typically applied to the downstream arm of the vertically integrated undertaking. Therefore, the test asks whether, given its

\textsuperscript{165} During a meeting with Ofwat held on 22 February 2002.

\textsuperscript{166} Letter to Ofwat dated 30 January 2003.

\textsuperscript{167} OFT draft guideline 414a, April 2004 paragraph 6.1
revenues at the time of the alleged margin squeeze, the integrated undertaking's downstream business would make (at least) a normal profit if it paid the same input price that it charged its competitors.

257. In this case the treatment of tankered landfill leachate can be considered the upstream market and the arranging treatment of, and tankering of; landfill leachate can be considered the downstream market.

258. QWM alleged that UU’s behaviour was exclusionary, and that the internal prices charged by UUW to Bioprocessing meant that QWM could not compete with UU in the market for arranging treatment of, and tankering, leachate. Given UU’s profit margins in the treatment market UU has scope to lower its price in the tankering market to below cost whilst still making a profit on treatment and tankering combined.

259. The Tribunal states at paragraph 560 of its judgement in Genzyme v OFT [2004] CAT 4: “As to the particular nature of the abuse here in question, in our view the facts that (a) Genzyme sells Cerezyme to the NHS at a list price which includes Homecare Services and (b) sells Cerezyme to other homecare providers at that same list price, give rise to an abusive margin squeeze within the principles of Napier Brown/British Sugar and National Carbonising.” In other words, in that case the Tribunal found that the dominant undertaking left no margin to its competitor whatsoever.

260. In contrast, table 8 shows that QWM did have a margin on which to compete with UU. Moreover, based on the differences in tankering costs, it could have further reduced the tanker price to win WRG’s business. QWM did not therefore face a margin squeeze comparable to that found to be abusive by the Tribunal in its judgement on Genzyme; in the Director’s view, there is no clear evidence to suggest that it faced a margin squeeze such as to force it to leave the market or to prevent it from competing effectively. In addition, as discussed above in connection with the issue of price discrimination, Ofwat has considered UU’s relevant internal papers and correspondence in detail and has not found any exclusionary intent.

**Conclusion on exclusionary conduct**

261. The prices charged to WRG by UU are not below average total cost and therefore do not indicate predation. Nor does the Director consider that UU selectively discounted to exclude QWM from the market, as QWM had some margin to win back to WRG business. Further, the Director does not consider that there is sufficient evidence of an abusive margin squeeze to justify the issue of a rule 4 statement of objections.
THE REQUEST BY QWM TO BE GRANTED DIRECT ACCESS (NOT THROUGH BIOPROCESSING) TO UU’S WWTW FOR THE DISPOSAL OF TANKERED LANDFILL LEACHATE.

262. QWM has also raised with Ofwat the question of whether it has a right to obtain access to UU’s WWTW in order to dispose of tankered landfill leachate.\(^{168}\) This complaint potentially raised issues under the “essential facilities” line of case law. However, in the event it has not proved necessary to consider that case law\(^{169}\).

263. QWM’s concerns appeared to relate to being required to deal with Bioprocessing rather than with UUW directly. However, there is no reason why the holder of a putative essential facility should not be permitted to require access to that facility to be negotiated through a subsidiary of his rather than direct; what matters is whether access is granted, and the terms of that access.

264. Further, UU/Bioprocessing does both in general and in the specific case of QWM permit access to third party providers of tankering services to its WWTWs. UU has told Ofwat\(^{170}\) that “If a third party with the appropriate skills, capability and technical knowledge wishes to negotiate terms for direct access then UUW will willingly enter into negotiations and will not seek to discriminate between the third party and UUI.”

265. QWM asked UU for direct access (by direct access QWM meant sidestepping Bioprocessing and paying only the Mogden cost of treatment and not the additional charges) to its WWTW on 4 March 2002. UU said it would be inappropriate to enter into a discussion regarding direct access (as above) to its WWTW due to the outstanding complaint.

266. Ofwat wrote to UU on 30 May 2002 asking for clarification over direct access to its WWTW and on what terms it would allow access to QWM.

267. In reply, UU’s solicitor\(^{171}\) said that “UUW would confirm that it is possible in principle for a company to negotiate access to discharge trade effluent by tanker direct into the treatment works of the Appointed Business. However, as you will appreciate, material discharged by tanker into a sewage works is by its nature material that cannot be discharged direct into the public sewer and which requires much more careful handling.

The terms and conditions on which UUW would permit direct discharge by a company would obviously need to be negotiated and the parties would

\(^{168}\) In a letter dated 21 January 2002
\(^{169}\) e.g. Case C-7/97 Oscar Bronner v. Mediaprint [1998] ECR I-7791
\(^{171}\) 21 June 2002
have to address (in addition to the question of charges) issues such as available capacity, arrangements for sampling and monitoring and for tanker reception, and compliance with site procedures and health and safety policies.”

268. In August 2002 Ofwat wrote again to UU’s solicitors\(^\text{172}\) asking about the terms on which QWM would be able to obtain direct access to UUW’s WWTW. In reply\(^\text{173}\) UU’s solicitors said “[…] you raise specific questions relating to […], criteria for Quantum to access UUW’s WWTW direct…. These questions appear to presuppose that there is some obligation on the part of United Utilities to grant such access. We do not believe this would be the case, unless there was a legitimate finding of dominance on UUW’s part or a legitimate finding that a particular WWTW was an essential facility.”

269. Ofwat was concerned about the issue of direct access and wrote to neighbouring WaSCs to find out whether they allowed direct access to their WWTW. Their responses showed that generally other undertakers allow direct access, subject to certain conditions being met.

**Ofwat analysis of the information received**

270. The information received from UU indicates that, as tanker operators can obtain access through Bioprocessing, UU is not in general denying access to an essential facility. As far as QWM is concerned, it does not appear that it has ever been denied access to UU’s WWTWs in the sense that it has not been permitted to dispose of leachate (which is the important point for present purposes); it is not relevant whether access has been permitted through Bioprocessing or any other part of the UU group. Although UU has disputed the contention that it is obliged to permit such access, it is, on the basis of the facts of the present case, unnecessary for the Director to resolve that issue.

**Conclusion**

271. The issue of direct access to UU’s WWTW was raised separately by QWM after the main body of its complaint had been received. The Director has considered QWM’s arguments and the information supplied by UU and other WaSCs. He has concluded that, since there is no denial of access as QWM is able to discharge its waste via UU’s waste reception arm Bioprocessing, that it is not necessary to assess whether UU is denying access to an essential facility.

\(^{172}\) 19 August 2002  
\(^{173}\) 25 September 2002
CONCLUSION

272. The Director finds that on the basis of the evidence before him there are insufficient grounds for him to issue a rule 4 statement of objections on any of the complaints raised by QWM. The Director also finds that there are no grounds for such action on any of the other issues the Director considered on his own initiative. The Director therefore brings Ofwat’s investigation of this matter to an end.
The diagram only shows the parts of UU’s structure relevant to the decision.

Where no links are shown the divisions within that column are at the same level of the organisational structure.
Annex two

Glossary of terms used in the decision

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>BOD</td>
<td>Biological oxygen demand</td>
</tr>
<tr>
<td>COD</td>
<td>Chemical oxygen demand</td>
</tr>
<tr>
<td>DGFT</td>
<td>Director General of the Office of Fair Trading</td>
</tr>
<tr>
<td>ECJ</td>
<td>European Court of Justice</td>
</tr>
<tr>
<td>HWD</td>
<td>Hazardous Waste Directive</td>
</tr>
<tr>
<td>Hyder</td>
<td>Hyder Industrial Ltd.</td>
</tr>
<tr>
<td>ITW</td>
<td>Independent treatment works</td>
</tr>
<tr>
<td>Landfill leachate</td>
<td>Any liquid percolating through deposited waste and emitted from or contained within a landfill</td>
</tr>
<tr>
<td>LTP</td>
<td>Leachate treatment plant</td>
</tr>
<tr>
<td>NDS</td>
<td>Northern Disposal Services</td>
</tr>
<tr>
<td>NNE</td>
<td>Northumbrian Water Ltd.</td>
</tr>
<tr>
<td>OFT</td>
<td>The Office of Fair Trading</td>
</tr>
<tr>
<td>Opex</td>
<td>Operating expenditure</td>
</tr>
<tr>
<td>PCBs</td>
<td>Polychlorinated Biphenals</td>
</tr>
<tr>
<td>PPC</td>
<td>Pollution prevention and control permit</td>
</tr>
<tr>
<td>QWM</td>
<td>Quantum Waste Management</td>
</tr>
<tr>
<td>SSNIP</td>
<td>Small but significant non transitory increase in price, sometimes referred to as the “hypothetical monopolist” test</td>
</tr>
<tr>
<td>SVT</td>
<td>Severn Trent Water Ltd.</td>
</tr>
<tr>
<td>SWMA</td>
<td>Strategic waste management assessment – conducted by the Environment Agency</td>
</tr>
<tr>
<td>The Tribunal</td>
<td>The Competition Appeal Tribunal (sometimes referred to as the CAT)</td>
</tr>
<tr>
<td>UK</td>
<td>United Kingdom</td>
</tr>
<tr>
<td>UU</td>
<td>United Utilities Plc</td>
</tr>
<tr>
<td>UUI</td>
<td>United Utilities Industrial Ltd</td>
</tr>
<tr>
<td>UUW</td>
<td>United Utilities Water Plc</td>
</tr>
<tr>
<td>WaSC</td>
<td>Water and sewerage company</td>
</tr>
<tr>
<td>WIA91</td>
<td>Water Industry Act 1991</td>
</tr>
<tr>
<td>WML</td>
<td>Waste Management Licence</td>
</tr>
<tr>
<td>WRG</td>
<td>Waste Recycling Group</td>
</tr>
<tr>
<td>WWTW</td>
<td>Waste water treatment works – operated by an appointed waste and sewerage company.</td>
</tr>
<tr>
<td>YKS</td>
<td>Yorkshire Water Ltd.</td>
</tr>
</tbody>
</table>
Annex Three

The Mogden formula

Ofwat regulates the cost of treating trade effluent disposed to sewer by setting the elements of the Mogden formula. The Mogden formula calculates the amount a receiving WaSC can charge to recover the cost of carriage to and treatment in its treatment plants (WWTW). The scale of this charge depends on set factors, coupled with the measured "strength" and quantity of the received effluent.

The Mogden formula is used to calculate the cost per cubic metre (m³) for the treatment of trade effluent at a wastewater treatment works (WWTW) transported by sewer.

Mogden = R + [(V + Bv) or M] + B(Ot/Os) + S(St/Ss)

- **R** - reception and conveyance
- **V** - primary treatment
- **Bv** - additional volume treatment for biological treatment
- **M** – treatment and disposal where effluent goes to sea outfall (M = marine)
- **B** - biological oxidation of settled sludge
- **Ot** - chemical oxygen demand (COD) of effluent after one hour quiescent settlement at pH 7
- **Os** - the COD of crude sewage after one hour’s quiescent settlement
- **S** - treatment and disposal of primary sludge
- **St** - total suspended solids (mg/litre) of trade effluent at pH 7
- **Ss** - total suspended solids (mg/litre) of crude sewage

The elements Ot and St change according to the strength of each waste treated, all other components have charges set annually as part of each undertaker’s charges scheme which are set out in Ofwat’s annual tariffs report.

In the case of tankered waste the element R is not used, as this is the charge for the reception and conveyance of waste through the sewer network.

Opex Mogden

Opex Mogden is a version of the standard Mogden formula used by UU until October 2001 with the elements intended to recover capital removed. Opex Mogden differs from the “full” Mogden formula in that the values for V, Bv, B, S, Os and Ss are different in the Opex Mogden formula resulting in lower charges for a given strength of waste.

In addition to the different parameter values the Opex Mogden formula used by UU also differs from the “full” Mogden formula in that it excludes R and M.  R and
M are excluded because the waste in question is tankered rather than transported by sewer, and there is no marine outfall at the works in question.
Annex Four - Analysis of pricing information provided by UU

**Landfill sites charged less than £6/m³ for treatment of tankered landfill leachate**

<table>
<thead>
<tr>
<th>Landfill Site, operator and location</th>
<th>Haulier (if known)</th>
<th>Average distance travelled to WWTW</th>
<th>Average Price per m³</th>
<th>Average cost of treatment calculated using the Mogden Formula</th>
<th>Average total cost of overheads</th>
<th>Average operating profit of BP per m³ of landfill leachate treated</th>
<th>Average percentage operating profit of BP per m³ of landfill leachate treated</th>
<th>Leachate characteristics</th>
<th>Other characteristics, location, distance from competition etc.</th>
<th>Number of alternative treatment options within a 30 mile radius</th>
<th>Position in November 2004</th>
</tr>
</thead>
<tbody>
<tr>
<td>[…]</td>
<td>Unknown</td>
<td>2.2 miles</td>
<td>[…]</td>
<td>£0.92</td>
<td>[…]</td>
<td>[…]</td>
<td>[…]</td>
<td>Leachate produced at this site is of a medium variable strength. Large volumes of leachate are tankered regularly to WWTW (up to 150 tankers per month).</td>
<td>[…]</td>
<td>0</td>
<td>[…]</td>
</tr>
<tr>
<td>[…]</td>
<td>Unknown</td>
<td>14.7 miles</td>
<td>[…]</td>
<td>£0.71</td>
<td>[…]</td>
<td>[…]</td>
<td>[…]</td>
<td>Leachate produced at this site is medium strength leachate. 20 – 50 tanker loads per month transported regularly to a WWTW for treatment.</td>
<td>[…]</td>
<td>1</td>
<td>[…]</td>
</tr>
<tr>
<td>[…]</td>
<td>Unknown</td>
<td>48.5 miles</td>
<td>[…]</td>
<td>£1.43</td>
<td>[…]</td>
<td>[…]</td>
<td>[…]</td>
<td>Leachate produced at this site is medium strength leachate. A fluctuating number of loads per month are tankered to a WWTW for treatment (20 – 150 loads per month).</td>
<td>[…]</td>
<td>0</td>
<td>[…]</td>
</tr>
</tbody>
</table>

176 Average total cost of overheads includes costs of sale, other overhead, unallocated overhead, tanker reception and ammonia (excluding Mogden)
| [...] | 21.7 miles | [...] | £0.22 | [...] | [...] | [...] | Leachate produced at this site is low strength and is tankered for treatment at a WWTW in small volumes. | [...] | 2 | [...] |
| [...] | Unknown | 5.9 miles | [...] | £0.99 | [...] | [...] | [...] | Leachate produced at this site is medium strength landfill leachate. Large volumes are tankered to WWTW every month (50 – 350 tanker loads per month). | [...] | 0 | [...] |
| [...] | Unknown | 25.3 miles | [...] | £1.05 | [...] | [...] | [...] | Leachate produced at this site is medium strength leachate. 50 – 100 loads per month are tankered to a WWTW for treatment. | [...] | 1 | [...] |
| [...] | Unknown | Unknown | [...] | £0.32 | [...] | [...] | [...] | Leachate produced at this site is low strength leachate. Variable amounts of up to 110 loads per month are tankered for treatment at a WWTW. | [...] | 0 | [...] |
## Landfill sites charged £6/m³ to £8.99/m³

<table>
<thead>
<tr>
<th>Landfill Site, operator and location</th>
<th>Haulier (if known)</th>
<th>Average distance travelled to WWTW</th>
<th>Average Price per m³</th>
<th>Average cost of treatment calculated using the Mogden Formula</th>
<th>Average total cost of overheads</th>
<th>Average operating profit of BP per m³ of landfill leachate treated</th>
<th>Average percentage operating profit of BP per m³ of landfill leachate treated</th>
<th>Leachate characteristics</th>
<th>Other characteristics, location, distance from competition etc.</th>
<th>Number of alternative treatment options within a 30 mile radius</th>
<th>Position in November 2004</th>
</tr>
</thead>
<tbody>
<tr>
<td>[…]</td>
<td>NDS/QWM/Unifleet</td>
<td>15 miles</td>
<td>[…]</td>
<td>[…]</td>
<td>[…]</td>
<td>Leachate produced at this site is medium strength leachate with potential for red list substances in one phase. Other phases produce medium strength leachate. Large volumes of leachate are regularly tankered to WWTW for treatment (up to 250 tankers per month).</td>
<td>[…]</td>
<td>[…]</td>
<td>7</td>
<td>[…]</td>
<td></td>
</tr>
<tr>
<td>[…]</td>
<td>QWM/NDS</td>
<td>11.3 miles</td>
<td>[…]</td>
<td>[…]</td>
<td>[…]</td>
<td>Leachate produced at this site is medium strength. 20 – 40 tanker loads per month are regularly tankered for treatment at a WWTW.</td>
<td>[…]</td>
<td>[…]</td>
<td>2</td>
<td>[…]</td>
<td></td>
</tr>
<tr>
<td>[…]</td>
<td>Unknown</td>
<td>105 miles</td>
<td>[…]</td>
<td>[…]</td>
<td>[…]</td>
<td>Intermittent small amounts of high strength leachate are tankered to WWTW for treatment.</td>
<td>[…]</td>
<td>[…]</td>
<td>0</td>
<td>[…]</td>
<td></td>
</tr>
<tr>
<td>[…]</td>
<td>QWM/NDS/Unifleet</td>
<td>1.8 miles</td>
<td>[…]</td>
<td>[…]</td>
<td>[…]</td>
<td>Leachate produced at this site is medium strength and variable. 20 – 50 loads per</td>
<td>[…]</td>
<td>[…]</td>
<td>5</td>
<td>[…]</td>
<td></td>
</tr>
<tr>
<td>Site</td>
<td>Leachate Produced</td>
<td>Distance to WWTW</td>
<td>Cost per Load</td>
<td>Frequency</td>
<td>Description</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>------</td>
<td>------------------</td>
<td>-----------------</td>
<td>--------------</td>
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<td>-------------</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| NDS  | Leachate produced at this site is medium strength. Small amounts of leachate are tankered to a WWTW for treatment on an infrequent basis. | 73.1 miles | £0.97 | 0 | [...]
| Unknown | Leachate produced at this site started as very low strength leachate although the strength increased over time. | 18.1 miles | £2.42 | 5 | [...]
| Unknown | Leachate produced at this site is medium strength leachate. Up to 100 loads per month are tankered to a WWTW for treatment. | 34.2 miles | £1.46 | 3 | [...]
| Unknown | Leachate produced at this site is medium strength leachate. This site regularly tankers 10 – 20 loads of leachate per month to a WWTW for treatment. | 7 miles | £1.39 | 0 | [...]|
### Landfill sites charged £9/m³ to £10/m³

<table>
<thead>
<tr>
<th>Landfill Site, operator and location</th>
<th>Haulier (if known)</th>
<th>Average distance travelled to WWTW</th>
<th>Average Price per m³</th>
<th>Average cost of treatment calculated using the Mogden Formula</th>
<th>Average total cost of overheads</th>
<th>Average operating profit of BP per m³ of landfill leachate treated</th>
<th>Average percentage operating profit of BP per m³ of landfill leachate treated</th>
<th>Leachate characteristics</th>
<th>Other characteristics, location, distance from competition etc.</th>
<th>Number of alternative treatment options within a 30 mile radius</th>
<th>Position in November 2004</th>
</tr>
</thead>
<tbody>
<tr>
<td>[…]</td>
<td>[…]</td>
<td>22.5 miles</td>
<td>[…]</td>
<td>[…]</td>
<td>[…]</td>
<td>[…]</td>
<td>[…]</td>
<td>Leachate produced at this site is medium strength. Intermittent, and varying loads from 2 to 69 loads per month are tankered to a WWTW for treatment.</td>
<td>[…]</td>
<td>3</td>
<td>[…]</td>
</tr>
<tr>
<td>[…]</td>
<td>ESL</td>
<td>34.2 miles</td>
<td>[…]</td>
<td>[…]</td>
<td>[…]</td>
<td>[…]</td>
<td>[…]</td>
<td>Leachate produced at this site is high strength.</td>
<td>[…]</td>
<td>3</td>
<td>[…]</td>
</tr>
<tr>
<td>[…]</td>
<td>Biffa</td>
<td>6 miles</td>
<td>[…]</td>
<td>[…]</td>
<td>[…]</td>
<td>[…]</td>
<td>[…]</td>
<td>Leachate produced at this site is medium strength leachate. Approximately 80 loads per month are regularly tankered to a WWTW for treatment.</td>
<td>[…]</td>
<td>4</td>
<td>[…]</td>
</tr>
<tr>
<td>[…]</td>
<td>[…]</td>
<td>17.5 miles</td>
<td>[…]</td>
<td>[…]</td>
<td>[…]</td>
<td>[…]</td>
<td>[…]</td>
<td>Leachate produced at this site is medium strength leachate. The site regularly tankers 50 – 150 loads per month to a WWTW for treatment.</td>
<td>[…]</td>
<td>2</td>
<td>[…]</td>
</tr>
<tr>
<td>[…]</td>
<td>[…]</td>
<td>13.6 miles</td>
<td>[…]</td>
<td>[…]</td>
<td>[…]</td>
<td>[…]</td>
<td>[…]</td>
<td>Leachate produced at this site is medium strength leachate. The</td>
<td>[…]</td>
<td>Unknown</td>
<td>[…]</td>
</tr>
</tbody>
</table>
site regularly tankers 10 – 20 loads per month to a WWTW for treatment.
## Landfill sites charged more than £10/m³

<table>
<thead>
<tr>
<th>Landfill Site, operator and location</th>
<th>Haulier (if known)</th>
<th>Average distance travelled to WWTW</th>
<th>Average Price per m³</th>
<th>Average cost of treatment calculated using the Mogden Formula</th>
<th>Average total cost of overheads</th>
<th>Average operating profit of BP per m³ of landfill leachate treated</th>
<th>Average percentage operating profit of BP per m³ of landfill leachate treated</th>
<th>Leachate characteristics</th>
<th>Other characteristics, location, distance from competition etc.</th>
<th>Number of alternative treatment options within a 30 mile radius</th>
<th>Position in November 2004</th>
</tr>
</thead>
<tbody>
<tr>
<td>[…]</td>
<td>Brock</td>
<td>16.1 miles</td>
<td>[…]</td>
<td>£0.26</td>
<td>[…]</td>
<td>[…]</td>
<td>[…]</td>
<td>Leachate produced at this site is low COD/SS leachate. Small amounts of leachate are regularly tankered to a WWTW.</td>
<td>[…]</td>
<td>5</td>
<td>[…]</td>
</tr>
<tr>
<td>[…]</td>
<td>QWM/NDS/ Unifleet</td>
<td>25.8 miles</td>
<td>[…]</td>
<td>£2.93</td>
<td>[…]</td>
<td>[…]</td>
<td>[…]</td>
<td>Leachate produced at this site is high strength.</td>
<td>[…]</td>
<td>8</td>
<td>[…]</td>
</tr>
</tbody>
</table>