

## Completed acquisition by Stericycle International LLC of Sterile Technologies Group Limited

The OFT's decision on reference given section 22 of the Enterprise Act 2002 given on 28 June 2006. Full text published 12 July 2006.

---

**Please note that square brackets indicate figures or text which have been omitted for reasons of commercial confidentiality.**

### **PARTIES**

1. **Stericycle International LLC (Stericycle)** is a US based company which operates in the UK through its subsidiary Stericycle International Limited. Stericycle provides specialised waste management and related products and services throughout England and Wales. Stericycle International Limited is a holding company for three further companies; White Rose Environmental Limited (WRE), Healthcare Waste Limited (HW) and Indigo Equity Holdings Limited (IEH).
2. **Sterile Technologies Group Limited (STG)** is incorporated and based in Ireland and provides clinical waste management services operating in the UK and Ireland. Its UK turnover in the year ending 31 December 2005 was approximately £27.6 million.

### **TRANSACTION**

3. Stericycle completed the acquisition of STG on 27 February 2006. The OFT's subsequent investigation was prompted by a number of customer complaints. The extended statutory deadline for consideration of this transaction expires on 28 June 2006 and the OFT's administrative deadline expires on 27 June 2006.

### **JURISDICTION**

4. As a result of this transaction Stericycle and STG have ceased to be distinct. The parties overlap in the supply of waste management services and the share of supply test in section 23 of the Enterprise Act 2002 (the Act) is met in respect of

the treatment and disposal of healthcare risk waste. The OFT therefore believes that it is or may be the case that a relevant merger situation has been created.

## RELEVANT MARKET

### Product market

5. The parties overlap in waste management services, specifically healthcare risk waste management services with their principal activities being in the collection, transportation, treatment and disposal of such waste. Healthcare risk waste producers include hospitals, dental practices, nursing homes, commercial pharmacies, GP practices and laboratories (e.g. universities, research institutions etc).
6. The principal methods for the treatment and disposal of such waste include:
  - Landfill;<sup>1</sup>
  - high temperature technologies (e.g. incineration and pyrolysis<sup>2</sup>); and
  - alternative technologies (e.g. dry heat, steam augers, autoclaves, microwaves and chemical treatment).
7. While many players in the industry limit their activities to one aspect of the supply chain (such as the collection of waste), the merging parties were engaged in the collection and transportation of waste, along with the provision of incineration and alternative technology services. The parties provide an overall health waste management service to end users (such as NHS Trusts) and individual services to other customers (such as non-NHS customers or in terms of the provision of capacity to service rival's NHS health waste management service contracts). The parties did not overlap in the landfill segment and it is therefore not considered further.
8. The parties maintain all treatment and disposal methods should be considered together. This view is also supported by some third parties that submit particularly that there is no meaningful distinction to be made between disposal by high temperature and by alternative technologies. However, in terms of considering

---

<sup>1</sup> Disposal by landfill is only appropriate if the waste does not require any further treatment before disposal. Such further treatment consists of dealing with the waste at high temperatures or by means of alternative technologies. In high temperature technologies, most of the waste is disposed of during the high temperature process. In alternative technologies, the mass of the waste is not as significantly reduced during the process.

<sup>2</sup> At pyrolysis plants the healthcare risk waste is combusted in the absence of oxygen at temperatures of between 600 degrees centigrade and 1000 degrees centigrade. The technology is suitable for the disposal of non-hazardous, hazardous infectious and hazardous non-infectious healthcare risk wastes. This technology is currently provided at one site by Compact Power in the UK.

landfill with waste treated with high temperature and alternative technologies, as noted at footnote 1, certain healthcare risk waste cannot be landfilled directly.

### **Collection, transportation, treatment and disposal of healthcare risk waste**

9. The parties argue that collection, transportation, treatment and disposal of healthcare risk waste are interdependent and will often be provided under one contract. Because of this, the merged entity submits that considering individual services fails to reflect the way in which the market actually works. However, on the demand-side there is no evidence of potential substitution between the collection, transportation, treatment and disposal of healthcare risk waste. As such the individual services are distinct.
10. On the supply-side, it is not essential that one undertaking perform all activities. Some collection and transportation service providers subcontract the treatment of waste to contractors such as the parties. Third party responses indicate that most companies collect and transport healthcare risk waste together and submit that these services should be analysed together. The parties also contend supply-side substitutability between collection/transportation and treatment/disposal, arguing this is evidenced by contractors moving into the treatment/disposal segment by building alternative technology sites. Even though there is evidence of entry, comments from competitors indicate that these services should be considered separately. One respondent noted it would take a minimum of two years to five years to switch from collection/transport to the treatment and disposal waste. Overall, it seems the cost and timeliness of entry is not sufficient to widen the product scope to include all segments.

### **Collection and transportation**

11. Collection and transportation is not considered further as no third parties have raised any horizontal competition concerns in this segment, the parties estimate the combined UK share of supply in the collection and transportation of healthcare risk waste is about 30 per cent and there are a number of large competitors remaining post merger, namely PHS, Rentokil and Cannon Hygiene.

### **Treatment and disposal of waste**

#### High temperature technologies

12. High temperature technologies encompass incinerators and pyrolysis. On the demand-side the parties, in fulfilling healthcare waste management contracts, and those third parties who subcontract to the parties to do this, can substitute between the different high temperature treatment technologies as long as the

sites have a permit specifying they can accept healthcare risk waste. On the supply-side, each high temperature technology plant requires a PPC permit that details the wastes that the plant is permitted to accept. Third parties maintain that pyrolysis is a substitute to incineration given it can treat all the same waste types. Incinerators and pyrolysis are therefore considered together.

13. All waste can be dealt with by high temperature technologies, but for certain types of waste streams, such as cytotoxic and cytostatic medicines, regulation requires there is no substitution to high temperature disposal. This waste is burnt with waste that does not necessarily have to be dealt with at high temperature in order to run the plant efficiently and because customers do not necessarily sort waste in to that which requires high temperature treatment and that which does not. It is clear that a 'rump' of healthcare risk waste which requires treatment by high temperature technology will remain.
14. Incinerators generally can be classified by the waste stream treated, for example, hazardous waste (including chemical and pharmaceutical waste), animal, municipal and clinical incinerators. The parties submit municipal waste incinerators could accept non-infectious healthcare risk waste subject to Environment Agency (EA) approval. They estimate that a conversion from a non-hazardous to a hazardous permit is not costly. Moreover, they note chemical waste incinerators (generally hazardous incinerators) should already be licensed to accept chemical wastes from hospitals and pharmaceutical wastes. The parties estimate that to modify a PPC<sup>3</sup> permit costs £2,000 - £10,000 and typically takes four to six months. However, detailed third party enquiries undertaken by the OFT have revealed insufficient evidence to confirm that, following a five to ten per cent increase in the price of healthcare risk waste disposal, existing incinerators processing alternative waste streams would change permits or increase capacity throughput of healthcare risk waste. Where such facilities are already processing healthcare risk waste, their current throughput of this waste has been included when calculating share of supply figures in this sector.

#### Alternative technologies

15. Alternative technologies are different from high temperature technologies, as such plants are significantly smaller, less capital intensive, use lower temperatures and are cheaper to run. Within this product frame, different technologies have different limitations. These limitations are reflected in the Waste Acceptance Criteria (WAC) specified in each plant's PPC permit or Waste Management Licence issued by the environmental regulator. Even though there may be variation between various technologies third parties do not delineate the technologies and the parties submit the different technologies are suitable for most hazardous

infectious waste. Alternative technologies will therefore be considered collectively.

#### Combined sector

16. It is also noted that a number of customers (certain NHS Trusts for example) contract for a complete healthcare risk waste disposal contract. Therefore in order to capture all relevant competitive interactions the impact of the merger on this combined sector is also considered.

#### Conclusion

17. Within the healthcare risk waste management sector the parties overlap in respect of two treatment routes, namely (i) high temperature (including both incineration and pyrolysis segments) and (ii) alternative technologies. Evidence obtained during this analysis on demand and supply side substitutability suggests it is appropriate to consider these two segments as distinct. For completeness we have also considered the two services together, since many end users do not distinguish between the two in their overall contracts and leave the parties to determine which method is used for most waste.
18. Within the high temperature segment available evidence suggests that in practice supply-side substitution between incinerators accepting different waste categories (e.g. chemical, animal, municipal, clinical) is limited; therefore it is appropriate to focus the competitive analysis on high temperature treatment for healthcare risk waste only.

#### Geographic market

19. The parties submit that the UK is the appropriate geographic frame of reference for the waste management market.<sup>4</sup> They state that conditions of competition are consistent across the country, and there is also some evidence that waste is routinely collected and transported across the country for treatment.

#### High temperature technologies

20. Third party responses highlight both national and regional dimensions to competition in this sector. Constraints placed on handling and transportation of healthcare risk waste mean that transport costs are relatively high and would

---

<sup>3</sup> The Pollution Prevention and Control Regulations 2000 (SI 2000 No 1973).

<sup>4</sup> As Stericycle had no presence in Northern Ireland before the merger, the transaction had no impact in Northern Ireland and the effect on this country is not considered further in this assessment.

suggest that in many instances distances travelled are kept to a minimum. Some smaller sites without a national presence maintain that they compete regionally and some customers require a regional site. Regional suppliers with lower transportation costs may have some competitive advantage. Furthermore, the parties have provided some evidence of regional price variations. In explaining such variations the parties stated that they were due to factors such as volume, geography of location and competition i.e. being dependent on the level of over capacity within the region. Some of the parties internal documents refer clearly to regional aspects of competition which complicates their claim that the market should be examined on a strictly national basis.

21. Due to the paucity of high temperature technology sites in certain areas of the country, a customer's 'local' site may in fact be some distance away (up to hundreds of miles, as in Scotland where there are no commercial healthcare waste incinerators) making it difficult to make reliable judgments as to geographic market definition at this stage. It is also noted that waste that needs to be dealt with at high temperature is a high value product and the parties have provided evidence of such waste being transported over a considerable distance. In addition the parties and others move waste around the country for logistical reasons – to cope with capacity peaks for instance. Finally, some respondents noted that a wide national presence is required for customers who have waste arisings in various parts of the country and it may be possible to consider chains of substitution which would expand the geographic scope.

#### Alternative technologies

22. Waste that can be dealt with by alternative technologies is of a lower treatment value, at around 50 per cent the value of high temperature technology waste, and hence the distance the waste can profitably be transported is likely to be reduced. Again, lack of sites in certain areas make identifying specific regional distinctions difficult but evidence provided by the parties shows that the vast majority of waste dealt with at alternative technology facilities has been transported less than 100 miles.

#### Conclusion on geographic scope

23. It is clear from the evidence considered during the assessment of this case that competition occurs on both a regional and a wider national basis in this sector and both aspects are considered below. Given the parties' position as the two main suppliers in the overall sector, and the fact that they offered a choice for customers throughout the country, there is merit in considering the wider national implications of the merger upfront before looking at the regional dimension.

## **HORIZONTAL ISSUES**

### **National issues**

#### High temperature technologies

24. There are 25 high temperature treatment sites in the UK (with an estimated total annual throughput capacity of about 150,000 tonnes), of which Stericycle operates nine and STG operates four. Sourcing capacity data direct from suppliers in the sector the OFT estimates that the parties combined share of supply is around 65 per cent (increment 20 per cent). The next largest competitors have less than 10 per cent each. Although the combined share is considerably higher than the capacity figures the parties claim (due mainly to their inclusion of extra capacity at incinerators focussing on different waste streams), third parties have generally verified the overall capacity of the sector and that the parties combined share of supply is similar to that suggested above.
25. The evidence suggests that the parties are each others closest competitors in terms of size and geographical spread and there is some evidence of switching between them. Rivals are much smaller and most have only one site. Substantial third party concern supports the proposition that the merger may result in unilateral effects leading to higher prices than absent the merger.
26. The parties argue that they are constrained by a number of alternative suppliers in the market; and that they have spare capacity. The parties argue that segregation will dramatically reduce the demand for high temperature technology and consequently increase the demand for the cheaper alternative technology treatments. In assessing the impact of this merger on competition in this sector, the OFT has therefore focussed on three key issues: i) the ability of customers to switch to alternative suppliers; ii) the level of spare capacity in the sector, and iii) whether increased segregation will lead to reduced demand and so free up further capacity.

#### Alternative high temperature technology suppliers

27. Customers and competitors have provided a consistent view that the ability to switch away from the merged firm is limited by the fact that rival suppliers are capacity constrained. As a result, customers' negotiating positions and ability to resist price increases is weakened. As noted above the vast majority of alternative suppliers each operate just one plant. Certain customers require high temperature treatment to be performed at more than one site and although the parties contend that such customers could multi-source from various sites such customers contest this and claim that lack of capacity at alternative sites would be likely to mean

that a proportion of waste would be sub-contracted back to the merged entity. Additionally, multi-sourcing would increase customer transport and administration costs.

#### Spare Capacity

28. The perception within the industry shown during the third party enquiries is that capacity in the sector is constrained. The parties maintain capacity is contracting and third party comments corroborate the view that capacity is shrinking due to closures. However, the evidence does not necessarily support the parties reasoning that this is a function of excess capacity. Comments provided to the OFT during this enquiry indicate that while competition from alternative technology has had some impact, incinerators have also closed as a result of stricter regulation which meant that substantial upgrades were required for certain plants to remain open. No direct evidence has been provided that the parties proposed closure, or switching to alternative use, of incinerators results directly from excess capacity in the sector.

#### Segregation

29. The parties argue that with the introduction of the Hazardous Waste Regulations 2005, which specifically prohibit the mixing of hazardous and non-hazardous wastes at source, and the imminent publication of the final version of the Department of Health guidance, it is very likely that more rigorous segregation of wastes will be practiced. Accordingly, the percentage of wastes that must be dealt with by high temperature technologies is expected to fall significantly, therefore reducing the demand for high temperature technology and consequentially increasing the demand for alternative technology plants.
30. In data terms the parties estimate that 420,000 tonnes of healthcare risk waste is produced annually. If segregated correctly the parties have claimed that only 20,000 tonnes (<5 per cent)<sup>5</sup> needs to be dealt with by high temperature technology. High temperature technology capacity is currently estimated at around 150,000 tonnes per annum indicating that capacity would be sufficient to meet such demand requirements.
31. It is not disputed that the introduction of the Hazardous Waste Regulations 2005 will provide the opportunity to increase segregation. Nonetheless, there is inconclusive evidence that this will be sufficient to constrain the parties given

---

<sup>5</sup> The parties state this figure in submissions to OFT although it is noted that one of the parties' internal documents suggests this figure could be as high as around 10 per cent - 15 per cent. It is also noted that this 5 per cent figure will not capture the additional waste which will be needed to 'bulk out' the waste which needs to be dealt with by high temperature technology.

their current capacity share. Furthermore, some third parties maintain that waste producers are not adhering to the change in law and there is debate between government and industry about the exact levels of waste which will need to be dealt with by high temperature technologies. In essence, complete segregation is not being practiced. Even though it is now a legal requirement to segregate, customer comments do not provide evidence of a drop in demand for high temperature technology. It is also noted that the parties' internal documents do not provide evidence that demand is expected to fall as a result of the Regulations. On the basis of the available evidence, the OFT considers that the reduction in demand is too speculative to mitigate the loss of competition arising from the merger.

32. The parties contend that a distinction should be made between waste which is disposed of for third parties and the waste which results from its own collection activities. Doing so would, the parties contend, reduce the level of waste which was affected by the merger as this would be limited to the third party 'open market' waste. Such a contention ignores the fact that the parties are not the producers of the waste themselves and all waste they handle is third party waste, the treatment and disposal of which has been competed for. As a result of the unilateral effect of the merger of the two main competitors for healthcare risk waste management contracts, the price of the treatment element of the contract could rise either through the parties own internal pricing or its pricing for rivals who subcontract to the parties. The contention therefore fails to capture the competitive dynamics of the industry.

#### Barriers to entry

33. Entry costs are unequivocally high for incineration. The main factors that deter entry in the incineration sector include:
  - Capital cost. Third parties iterate that entry is capital intensive. Cost estimates for a viable entrant range from £1.5 million up to £10 million, most valuing it at around £5/6 million.
  - Regulatory issues: Approval and consultation for an Environment Agency licence translates into long lead times and further cost. The parties maintain costs have increased between by up to £100,000 per facility due to the Waste Incineration Directive. Moreover, new emission standards have required further capital investment. Third parties submit that it is difficult to obtain approval for such sites.
  - Long contracts: waste producers are generally locked into long term contracts for waste disposal with contract terms of five to ten years plus not being unusual. This limits the available market for new entrants.

- Economies of scale: plants must generally operate at 80 per cent capacity to break even which would require sufficient contracts in place from start up.
34. No new entry in the incinerator sector has occurred in the last five years and no evidence of potential entry has been provided. In terms of expansion, the parties maintain that companies that specialize in municipal, animal and chemical waste incineration could take additional healthcare risk waste. However, as discussed above in product frame, detailed OFT third party enquiries have failed to find sufficient evidence that this is a realistic intention.
  35. Pyrolysis is substitutable for incineration. Compact Power entered in 2004 and although indicative that entry is possible, entry costs are still considered high.
  36. On the evidence available to it, the OFT concludes that the threat of new entry is insufficient in scope and timeliness to offset the substantive concerns raised by the merger.

#### Conclusion

37. It is not clear that the reduction in competition resulting from the merger, coupled with capacity constraints faced by competitors is offset to a sufficient degree by waste segregation or any other factors. In addition there are extensive customer concerns and barriers to entry are high. Therefore post-merger price increases would appear to be profitable and on this basis the OFT considers that it is the case that the merger has resulted or may be expected to result in a substantial lessening of competition in the high temperature treatment of healthcare risk waste.

#### Alternative Technologies

38. Sourcing capacity data direct from providers in the sector the OFT estimates that the parties combined share of supply is around 55 per cent (increment about 15 per cent) out of a total of around 130,000 tonnes. The next largest competitors have around 10 per cent each. Third parties verify the parties combined share of supply as being close to this figure. Although to a lesser extent than high temperature treatment, third parties raised concerns that the merger may result in non-coordinated effects leading to higher prices than absent the merger.
39. The parties argue that the vast majority of healthcare risk waste can be treated through alternative technologies, and that they are constrained by a number of alternative technology providers in the market who have spare capacity to whom customers can switch and that there is evidence of new entry. Third parties consistently state that customers can switch if capacity is available and there is more capacity than in the high temperature technology segment, although

evidence of excess capacity in this segment is limited. Concerns about the cost of multi-sourcing may also arise for similar reasons as explained above.

#### Barriers to entry

40. It is apparent that there has been increasing investment into the alternative technologies segment. Third parties corroborate the view that this field might be easier for competitors to move into as costs are lower than for high temperature treatment.
41. The main factors influencing entry in the alternative technology segment include:
  - Capital cost. The parties estimate that it costs £300,000 – £450,000 to enter per plant and such plants can be purchased and operated for less than a tenth of the cost of high temperature disposal technologies.
  - Regulatory issues: Regulation can raise costs for suppliers in keeping up to date with regulatory developments. However the parties submit that planning permission and Environmental Agency licences are simple to obtain.
  - Long contracts: waste producers are generally locked into long term contracts for waste disposal, with contract terms of five to ten years plus not being unusual. This could be considered to limit the available market for new entrants.
42. In terms of evidence of entry, the parties submit entry has occurred by previous 'collection only' companies, Cliniserve, General Waste Reduction, Waste Solutions and Vetspeed. Moreover, there is evidence of expansion. From Mid 2006 it is understood that Grundons will have 5000 tonnes of spare capacity due to the development of a new site. The parties are also scheduled to increase treatment capacity in Larkfield due on stream in Q3 2006. Since January 2005 the Environment Agency has issued licences for or received applications for approximately eight to ten new alternative technology treatment sites, although this does not mean that construction is complete and they are all operational.
43. The available evidence of entry is not considered sufficiently timely to constrain the strong position of the parties in the alternative technology sector. Given the parties existing strong position, entry would have to be on a substantial scale to offset that position.

#### Conclusion

44. On the basis of a strong position in alternative technology, customer concern and the lack of clear evidence of entry, the OFT considers that it is or may be the case that the merger has resulted or may be expected to result in a substantial

lessening of competition in the treatment of healthcare risk waste by alternative technologies.

#### High temperature and alternative technologies combined

45. Many customers, primarily the NHS trusts, contract out for a complete healthcare risk waste disposal contract and advantages of cost and simplicity lie with the combination of these complementary services. The balance of the technologies used in the treatments is left to the contractor. If the parties' position in both high temperature and alternative technologies is considered, customers still have concerns. Sourcing capacity data direct from suppliers in the sector the OFT estimates that the parties combined share of supply in the combined sector is around 60 per cent (increment around 30 per cent). Such a view of the combined share is supported by a number of third parties.
46. Given the parties high combined share of supply, questions remaining over the availability of capacity, and the limited constraint from competitors and barriers to entry, the OFT considers that it is or may be the case that the merger has resulted or may be expected to result in a substantial lessening of competition in the combined sector.

#### Regional issues

47. Although rejected by the parties as geographic frames of reference, all three product frames can be considered on a regional basis. The exact definition of the regions is not possible due to the variations noted in the discussion of the geographic market above, although the parties have submitted their own suggestions. On this basis, and on examining the geographic spread of the parties' facilities, the parties are strongly concentrated as a result of the merger (over 60 per cent of capacity) in South East, the Midlands and the North West for high temperature technology. As STG had a strong position in alternative technology pre-merger, when both high temperature and alternative technology are considered the parties have a strong position in most regions. On this basis the OFT considers that it is or may be the case that the merger has resulted or may be expected to result in a substantial lessening of competition on a regional delineation in relation to the treatment of healthcare risk waste by high temperature technologies and alternative technologies alone and combined.

## **BUYER POWER**

48. The parties maintain NHS trusts buy in large regional groupings and maintain rigorous procurement processes and therefore have substantial buyer power. The parties also contend that the NHS has the option to treat waste itself and quotes in-house supply as an option. Collaborative procurement hubs, legal entities that will be established with constituent Trusts, will have legal ability to contract on behalf of Trusts. At present there are three, including one consortium in the North East comprising 10-15 Trusts. Over the next five years there is expected to be 15 hubs covering most Trusts, although at the moment most Trusts work in isolation. Comments from third parties suggest that NHS Trusts have predominantly acted independently of each other and therefore had minimal buyer power. When this is considered along with the fact that competitive alternatives are considered limited and capacity constrained, the evidence does not support a conclusion that customers have buyer power when it comes to making purchase choices for treatment and disposal of their healthcare risk waste.

## **VERTICAL ISSUES**

### **Foreclosure of competitors**

49. Post-merger the parties are active in all levels of the supply chain i.e. the collection, transportation and treatment of healthcare risk waste. In relation to collection and transportation, some competitors raised the concern that, given the increase in concentration in treatment and disposal, the merged entity will have the ability and incentive to increase competitors' costs. The existence or creation of downstream market power may increase the ability and/or incentive of the merged entity to raise costs to competitors that subcontract to the parties for high temperature or alternative technology capacity (e.g. collectors or transport only companies or collectors and transporters who have some limited treatment capacity themselves).
50. The parties' believe that competitors could source all of their treatment and disposal requirements outside of the parties group, as there is sufficient high temperature technology capacity. It contends that the merged entity has only around a 20 per cent share of national high temperature technology capacity. However, this figure is not supported by the OFT's analysis outlined above. The parties claim the lower share of capacity figure does not give them the ability or incentive to raise rivals costs.
51. The OFT's estimates of capacity levels suggest that there is substantially less capacity available than the parties maintain with the parties combined UK share of

supply for high temperature technology capacity at 65 per cent, alternative technology capacity at 55 per cent and combined high temperature and alternative technology capacity at 60 per cent. Further, in some regional areas the parties also hold a very strong position. Additionally, third parties consistently maintain there is limited spare capacity, especially for high temperature technology.

52. Given the above, it is plausible that the merged entity has the ability and incentive to increase the cost of treatment to competitors. The OFT therefore considers that it is or may be the case that the merger has resulted or may be expected to result in a substantial lessening of competition by raising rivals' costs.

#### **Foreclosure of sharp container manufacturers**

53. Stericycle (White Rose) operates a joint venture with Daniels Corporation, named White Rose Sharpsmart Limited which make reusable sharps containers. A concern was raised that the increase in concentration in high temperature technology capacity means the merged entity will have the ability and incentive to raise the price charged to customers for the collection and disposal of sharps containers that are not the White Rose Sharpsmart reusable system. The effect of this would be to foreclose the market to manufacturers of alternative disposal containers.
54. The disposal method of sharps is a contentious issue. The merged entity believes the regulatory framework requires all sharps should be dealt with by high temperature technology and alternative technologies will not suffice for these purposes. But it maintains some companies process sharps through alternative technologies, and there is some, albeit limited, evidence to support this. The parties maintain that if the merged entity increases prices for sharps, this will impact its own business to the benefit of competitors.
55. One third party noted that the White Roses Sharpsmart has never taken off commercially, and is a very expensive system due to the logistics of transporting and cleaning the containers and concerns regarding contamination. White Rose has had this system for five years and has only introduced it into a handful of NHS trusts. In essence for a foreclosure strategy to work, the price increase would have to be substantial; the parties contend that disposal through Sharpsmart is currently five times more expensive than ordinary healthcare risk waste disposal. Nonetheless, the parties combined UK share of supply is high and at this stage of the analysis it is unclear whether the foreclosure strategy is plausible. On the basis of the above, and in light of its conclusion in relation to other aspects of the merger, there is no need to reach a firm conclusion in respect of this aspect of the merger.

### **THIRD PARTY VIEWS**

56. As noted above, the vast majority of third parties, from the range of customers, competitors and governmental bodies contacted have concerns about the merger and suggest it will result in prices higher than they otherwise would have been.
57. A number of third parties contended that the parties are the only companies that dispose of radioactive healthcare risk waste. This fact is contested by the parties who state they have limited knowledge of this small segment but maintain that other options are available to customers. OFT enquires have revealed that a number of alternative sites do exist but that the parties are considered by some to have the majority of such sites between them. In light of the lack of evidence the OFT has in relation to radioactive waste, and in light of the conclusions in relation to other aspects of the treatment and disposal of healthcare risk waste, there is no need to reach a firm conclusion on this aspect of the merger.

### **ASSESSMENT**

58. The parties overlap in collection, transportation and treatment of healthcare risk waste. Within disposal routes we consider (i) high temperature technologies (including incineration and pyrolysis) and (ii) alternative technologies. These product frames are considered on a national and regional basis.

#### **National Issues**

59. The parties UK combined share of supply (based on third party evidence) of high temperature treatment of healthcare risk waste is approximately 65 per cent (increment 20 per cent). The parties are each other's closest competitors as the two main providers of high temperature technology capacity in the UK and the only providers with anything approaching a national offering; barriers to entry appear to be high and there is a high level of third party (including strong customer) concern. Other competitors operate on a substantially more limited scale and there is evidence that they face capacity constraints. It is not clear that the reduction in competition resulting from the merger, coupled with the capacity constraints faced by competitors is offset to a sufficient degree by the prospect of surplus capacity resulting from segregation diverting demand to alternative technologies. The OFT therefore considers that it is the case that the merger has resulted or may be expected to result in a substantial lessening of competition in the supply of high temperature treatment for healthcare risk waste.
60. The parties UK combined share of supply of alternative technologies treatment of healthcare risk waste is approximately 55 per cent (increment about 15 per cent).

A number of third parties raise the concern that the increase in concentration between the parties supports the proposition that the merger may result in non-coordinated effects leading to higher prices than absent the merger. However, the perception that capacity is constrained is not as strong as within the high temperature treatment segment, and it is also apparent that there has been increasing investment into the alternative technologies segment. Nonetheless, spare capacity in the segment is difficult to confirm and the constraint placed by potential suppliers remains in question given long term contracts held, timescales for development of sites and no conclusive evidence to verify any new expansion or entry which could be considered to challenge the parties' position. On this basis, the OFT considers that it is or may be the case that the merger has resulted or may be expected to result in a substantial lessening of competition in the supply of alternative technologies treatment for healthcare risk waste.

61. For the sake of completeness, on the basis of a combined definition, given the parties high combined share of supply, questions remaining over the availability of capacity, inconclusive evidence of future entry constraints in the alternative technologies segment, high barriers in high temperature technology and limited competitors, the OFT equally considers that it is or may be the case that the merger has resulted or may be expected to result in a substantial lessening of competition in the combined sector.

### **Regional Issues**

62. Given the parties strong position on a regional delineation and their high shares of supply in a number of regions, the OFT considers that it is or may be the case that the merger has resulted or may be expected to result in a substantial lessening of competition on a regional delineation in the supply of treatment for healthcare risk waste by high temperature technologies, alternative technologies and on a combined basis.

### **Vertical concerns**

63. Post-merger the parties are active in all levels of the supply chain i.e. the collection, transportation and treatment of healthcare risk waste. In relation to collection/transportation, some competitors raised the concern that given the increase in concentration in the downstream market, i.e. treatment, the merged entity will have the ability and incentive to raise rivals costs. The parties combined UK share of supply for each segment is in excess of 50 per cent. In conjunction with this, third parties consistently maintain there is limited spare capacity, especially for high temperature technology. It therefore seems plausible that the merged entity has the ability and incentive to increase costs to competitors. The OFT therefore considers that it is or may be the case that the merger has resulted

or may be expected to result in a substantial lessening of competition by raising rivals' costs.

## **Conclusion**

64. In light of the above analysis the OFT believes that it is or may be the case that the merger has resulted or may be expected to result in a substantial lessening of competition within a market or markets in the United Kingdom.

## **UNDERTAKINGS IN LIEU**

65. Where the duty to make a reference under section 22(1) of the Act is met, pursuant to section 73(2) of the Act the OFT may, instead of making such a reference, accept from such of the parties concerned undertakings as it considers appropriate for the purpose of remedying, mitigating or preventing the substantial lessening of competition concerned or any adverse effect which has or may be expected result from it.
66. The OFT has therefore considered whether there might be undertakings in lieu of reference which would address the competition concerns outlined above. The OFT's guidance on undertakings in lieu of reference states that, 'undertakings in lieu of reference are appropriate only where the competition concerns raised by the merger and the remedies proposed to address them are clear cut, and those remedies are capable of ready implementation' (see Mergers - Substantive Assessment guidance para 8.3).
67. Stericycle has offered the following undertakings in lieu:
- a. Price undertakings. The merged entity's price for any service where the OFT found a substantial lessening of competition could be displayed on its website and linked, for example, to RPI or a formula more closely related to industry costs. Any customer or competitor not offered the published price would be able to notify the breach to the OFT;
  - b. If the above undertaking does not prove acceptable the merged entity is prepared to divest two incineration sites totalling 14,500 tonnes of capacity [ ]. Additionally, the merged entity is prepared to divest the [ ] autoclave alternative technology site with 3,000 tonnes of capacity.
68. The OFT does not consider that the price undertakings would be sufficient to address the concerns identified above and would not help to replicate the pre-merger position. Price is not purely a function of RPI and establishing agreement on industry costs is not readily implementable. Such an undertaking would also

raise issues of cost and enforcement for the OFT. And of particular concern would be that publication of the merged entities prices in this way could help facilitate coordinated effects in the industry.

69. The proposed structural undertakings would also fail to address the substantial lessening of competition outlined above. They would not recreate the pre-merger situation. Only about half the increment in high temperature and less than that in alternative technology is involved. It is also unclear whether sales (to either one or four smaller operations) would be able to recreate the pre-merger competitive position where two major players were in active competition both on a regional and a national level with each other.
70. On the basis of the above, the proposed remedies do not meet the 'clear cut' and readily implementable requirement for the OFT to consider undertakings in lieu of reference.

#### **DECISION**

71. This merger will therefore be referred to the Competition Commission under section 22(1) of the Act.