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OFFICE OF FAIR TRADING

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The Producer Responsibility Obligations  
(Packaging Waste) Regulations 1997

# Valpak Limited

**A report by the Director General of Fair Trading on the  
competition scrutiny of the company's compliance scheme**

**July 1997**

# VALPAK LIMITED

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## GLOSSARY

This report contains a number of specialised terms whose meanings may not be immediately clear to the general reader. These are explained below:

Converter	a firm that converts raw materials into packaging
Cullet	waste glass that has been recovered for recycling, also known as 'glass recyclate'
Downstream companies	companies which, in the chain of supply of a product, are closer to consumers: in this report the term is typically used to refer to those firms that receive, rather than produce, packaging materials - such as retailers handling pre-packed goods
First-mover advantage	a potential competitive advantage gained through being the first operator in a specific market
Obligated company	a company that, under the Regulations, is obliged to recover and recycle used packaging materials
PRN	a Packaging Waste Recovery Note, issued by a reprocessor as evidence of the volume of waste materials it has handled
Upstream companies	companies which, in the chain of supply of a product, are closer to the manufacturers of raw materials: in this report the term is typically used to refer to firms in the business of producing and reprocessing packaging materials
Waste arisings	waste material that is a byproduct of a firm's normal activity

# 1 GENERAL SUMMARY

- 1.1 This is a report of my competition scrutiny of the compliance scheme set up by Valpak Limited, as required by regulation 31 of the Producer Responsibility Obligations (Packaging Waste) Regulations 1997 (the Regulations).
- 1.2 In terms of the types of obligated companies eligible for membership, the Valpak scheme is cross-sectoral and will deal with all types of packaging material for which it will discharge its members' obligations.
- 1.3 As the first compliance scheme to be set up, Valpak has a distinct 'first-mover' advantage. In consequence I have carefully considered whether this factor might present the company with the opportunity to establish a dominant position and secure exclusive contracts with the reprocessors of waste material. I was concerned that such a move might mean that other schemes - and obligated companies that had chosen to follow the individual compliance route - would be unable to arrange for the recovery and recycling of their waste material. I have also investigated the position of those companies that generate waste packaging material and whether they would be able to bring that material to the scheme, or at least receive credit for it. In addition, I have considered whether any element of cross-subsidisation would be possible or desirable, both within and between materials, and, if there were any such cross-subsidisation, whether it might distort competition between the various waste streams.
- 1.4 Although my task under the Regulations is to carry out a competition scrutiny, the consultation notice my Office placed in trade and national publications produced a wide range of responses, some of which expressed anxieties that did not strictly relate to competition issues. I have examined the points raised as far as I am able to do so, given my task under regulation 31. In the course of my enquiries, I have looked at the criteria for membership of the scheme, the possibility for limiting the number of members, the obligation for Valpak not to terminate the membership of founder members until at least 2001, and the structure of the company's board.
- 1.5 Having investigated all these issues, I am content that the Valpak scheme meets the requirements of the competition scrutiny under the Regulations: that is to say, it does not have, and is not likely to have, the effect of restricting, distorting or preventing competition, and it does not lead, and is not likely to lead, to an abuse of market power. Having reached that conclusion, I do not need to consider the remaining question for me under regulation 31, namely, whether - if the scheme is or is likely to have the effect of restricting, distorting or preventing competition - the effect is or is likely to be no greater than is necessary for achieving the environmental or economic benefits mentioned in section 93(6) of the Environment Act 1995.

- 1.6 I have had to take the Regulations in the form in which they were made by the Secretary of State for the Environment and approved by Parliament. I do, however, have some comments on their effects on competition as they currently stand. I believe that the lack of an *obligation* on reprocessors to issue a Packaging Waste Recovery Note (PRN) on demand may have anti-competitive effects. Where an obligated company (or a firm acting on its behalf) takes waste to a reprocessor and it is accepted, I consider that the reprocessor should be required to issue a PRN if one is requested - at present there is no such requirement, and I do not think that that position is satisfactory. I believe that it would be consistent with the purpose of the Regulations for there to be a requirement to issue a PRN if the waste holder asks for one. I hope that this issue can be resolved.
- 1.7 During the development of the Regulations, my officers expressed their disquiet about the provisions that required a producer to pass the whole of its obligation to a collective scheme, rather than being able to meet its obligations in part by itself, and take its remaining requirements to the scheme. I still take the view that, for effective competition to work in this market, obligated producers should have the choice of splitting their recovery and recycling requirements either between different compliance schemes or between such a scheme and individual compliance, and I hope that this issue can be re-examined at some stage.

### **Recommendation**

- 1.8 I recommend that, in accordance with regulation 31(5), you should advise the Environment Agency that you are satisfied that the Valpak scheme meets the requirements of the competition scrutiny.

## **2 BACKGROUND**

### **The EC Directive**

- 2.1 The European Directive on Packaging and Packaging Waste (94/62/EC) came into force on 31 December 1994. Its aim is to harmonise national procedures to deal with waste packaging materials and it applies to all forms of packaging.

### **The Environment Act 1995**

- 2.2 In order to implement the EC Directive in the United Kingdom, section 93(1) of the Environment Act 1995 (the Act) provides for the Secretary of State for the Environment, Transport and the Regions to make regulations for ‘promoting or securing an increase in the re-use, recovery or recycling of products or materials’.<sup>1</sup> Section 93(7) imposes a duty on him to exercise the power to make regulations ‘in the manner which he considers best calculated to secure that the exercise does not have the effect of restricting, distorting or preventing competition or, if it is likely to have any such effect, that the effect is no greater than is necessary for achieving the environmental or economic benefits [set out in section 93(6)]’.
- 2.3 The Act established the Environment Agency (covering England and Wales) and the Scottish Environment Protection Agency (generally referred to throughout this report collectively as ‘the environment agencies’) and transferred to them various functions relating to a wide range of environmental issues including flood defences, contaminated land, abandoned mines, the national parks, air quality, and the reuse of packaging waste material.

### **The Producer Responsibility Obligations (Packaging Waste) Regulations 1997**

- 2.4 The Producer Responsibility Obligations (Packaging Waste) Regulations 1997 (SI 1997/648) made under the Act came into force on 6 March 1997. Their aim is to secure a more sustainable approach to dealing with packaging waste, and to reduce the amount of such waste going to landfill. In order to attain these objectives, they place obligations on businesses in the packaging chain to achieve target levels of recycling and recovery in relation to the amount of packaged goods they place on the market. The targets in the Regulations can be met only by increasing the UK’s present overall levels of recovery and recycling. (The levels currently attained are discussed in Chapter 3.) The form of the Regulations, and in particular the decision to place

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1 The Act does not extend to Northern Ireland, where separate legislation will be necessary.

obligations on the four main activities within the packaging chain<sup>1</sup> and how the burden should be shared between those activities, reflect the outcome of lengthy consultations that took place between Government and the representatives of the businesses affected over a three-year period, from 1993 to 1996.

2.5 The Regulations require certain businesses to register with the appropriate environment agency to recover and recycle specific tonnages of packaging waste, and to certify that those targets have been achieved. Broadly, these requirements apply to waste paper, glass, metals, and plastic packaging materials, and are to be extended (in the form of a recovery target) to cover wood packaging from 1 January 2000. They set out the obligations incurred by way of percentages of packaging material to be recovered depending on the activity carried out. 'Recovery' in this context does not exclusively mean recycling: the EC Directive set out 13 ways in which recovery might be achieved and these are repeated in Part II of Schedule 3 to the Regulations. In practice, the most likely method of recovery, other than recycling, will be the 'waste-to-energy' route through incineration to produce a source of heating and lighting (see R9 of Part II of Schedule 3 to the Regulations: 'The use of waste principally as a fuel or other means to generate energy'). Obligations to recover and recycle waste packaging materials are incurred by all businesses with an annual turnover of £5 million (£1 million from the year 2000) which handle more than 50 tonnes of packaging materials in one year, and which are engaged in one or more of the following activities:

**manufacturing packaging raw materials** - obliged to recover 6%;

**converting material into packaging** - obliged to recover 11%;

**using packaging to pack products** - obliged to recover 36%;

**selling packaging to the final consumer** - obliged to recover 47%;

or which:

**own the packaging** on which any of those activities are carried out; or

**supply such material to another stage in the packaging chain or to the final user.**

2.6 Importers of packaging material are treated comparably, except that there is a 'rolled-up' obligation depending on the point at which the packaging is imported. For

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1 The four activities are: manufacturing packaging raw material; converting materials into packaging; packing and filling packaging; and selling packaging to the final user.

example, material imported by a packer in the UK (who sells on to a retailer) carries a 53% obligation (6% + 11% + 36%).

- 2.7 The overall recovery target for all materials is 38% in 1998 and 1999, rising to 43% in 2000, and 52% from 2001 onwards. As part of this recovery obligation, the companies affected have to recycle 7% of each material that they handle in 1998 and 1999, 11% in 2000, and 16% from 2001 onwards.
- 2.8. Obligated companies can either organise the recovery and recycling of sufficient material to fulfill their obligations themselves - by taking the **individual route** - or they can join a registered **compliance scheme**. Membership of such a scheme exempts a firm from its own individual recovery and recycling obligations: the scheme assumes responsibility for meeting its members' overall obligations. Such schemes are required to be registered with the appropriate environment agency.
- 2.9. Regulation 31 provides for a competition scrutiny by the Secretary of State for Trade and Industry, advised by the Director General of Fair Trading, to ensure that a scheme does not have, and is not likely to have, the effect of restricting, distorting or preventing competition, or that, where it does, the effect is or is likely to be no greater than necessary for achieving the environmental or economic benefits in section 93(6) of the Act, and that the scheme does not, and is not likely to, lead to an abuse of market power. The Director General is required to advise the Secretary of State on whether, in his opinion, the Secretary of State may be satisfied that the scheme meets the requirements of the scrutiny. Unless it has been approved by the Secretary of State (following advice from the Director General) a compliance scheme cannot be registered with either the Environment Agency or the Scottish Environment Protection Agency. There is also provision for the Director General to continue to monitor the various schemes and to advise the Secretary of State if he considers that a particular scheme no longer meets the requirements of the competition scrutiny.
- 2.10 Regulation 32 provides that the Restrictive Trade Practices Act 1976 does not apply to any agreement for the constitution of a body which is exclusively concerned with the operation of a registered compliance scheme. Regulation 33 applies to any agreement which does fall within the Restrictive Trade Practices Act, where at least one of the parties is an operator of a registered scheme and the agreement is made for the purposes of that scheme. If it appears to the Secretary of State that the restrictions in an agreement essentially meet the competition test she may give a direction to the Director General requiring him not to make an application to the Restrictive Practices Court in respect of that agreement. The Court may not make an order in respect of an agreement or provision which benefits from a declaration by the Secretary of State.
- 2.11 During the development of the Regulations, my officers expressed concern about the provision requiring a producer to pass the whole of its obligation to a scheme, rather

than being able to meet its obligations in part by itself, and taking its remaining requirements to a scheme. I recognise that this provision ensures that the appropriate agencies are able to carry out a satisfactory audit of obligated companies who are members of a scheme, and that - were producers free to take only their more awkward reprocessing requirements to such a scheme - it would be more difficult to establish effective schemes generally and to achieve the cross-sectoral co-operation which the Regulations seek to encourage, but I remain of the view that, for effective competition to work in this market, obligated producers should have been given the choice of splitting their recovery and recycling requirements between different schemes, or between such a scheme and the individual route.

- 2.12 I also have concerns about the procedures in place for the issuing of Packaging Waste Recovery Notes (PRNs). I believe that where an obligated company takes waste to a reprocessor and it is accepted, the reprocessor should be *required* to issue a PRN if one is requested. I have been told that it is necessary to allow reprocessors to keep some waste on which they have not issued PRNs to help meet their own obligations. There will doubtless be some companies or individuals taking waste for reprocessing which, for various reasons, do not require PRNs. Such material may well be a source of material towards the reprocessors' own obligation, but if it is insufficient, it seems to me that the reprocessor will have to make other arrangements, either by collecting waste itself, or by joining a scheme. I believe that it would be consistent with the purpose of the Regulations for there to be a requirement to issue a PRN if a waste holder requests one. I am aware, of course, that no such requirement is laid down by the Act or the Regulations, but I consider that this matter should be looked at again when the Regulations are reviewed, if it is not possible to change the present situation.

## **3 THE MARKET**

### **Waste packaging materials**

- 3.1 The markets affected by the Regulations and by schemes established under them are those for the recovery of recycling of paper, glass, metal and plastic packaging materials. Each of these markets is briefly described in the following sections. Further details are set out in Annex A.

### **Paper**

- 3.2 The Paper Industry Materials Organisation estimates that some 3.6 million tonnes of paper packaging were used in 1996 (principally paper sacks and bags, and fibreboard packing cases, rigid boxes and cartons), of which 1.4 million tonnes were recycled (39%). Most paper packaging waste is recycled into corrugated case material for sale to box manufacturers. In addition, about 75,000 tonnes (2%) were recovered through waste to energy. Paper and board has an advanced recycling infrastructure already in place and collection could be expanded relatively easily. The recycling target will principally be met through the increased recycling of corrugated packaging, although there is a limited range of end-product use.
- 3.3 The collection of paper and board from commercial outlets is mainly carried out by waste-paper merchants who collect, sort and bale the waste paper and board. Overall there are some 120 such merchants in the UK, but the market is dominated by 10 large firms, owned by the paper mills, which account for about 75% of collected waste paper. Larger quantities will have to be collected for the UK to meet its obligation: this is likely to involve increased collection of smaller lots from retail outlets.
- 3.4 The reprocessing of paper packaging in the UK is highly concentrated. There are only eight board mill groups and these are dominated by four major groups: Smurfit, St Regis (David H Smith), SCA, and British Plasterboard, which together account for about 60% of recycling capacity. The cost of building a new board mill with a recycling capacity of 40,000 - 50,000 tonnes a year is £250 million - £300 million.

### **Glass**

- 3.5 The UK currently produces about 1.9 million tonnes of glass packaging a year (with imports and exports more-or-less in balance): the level of recovery has increased from around 188,000 tonnes in 1989, to some 361,000 tonnes in 1993, and approximately 430,000 tonnes a year at the present time (23% of production). Glass is comparatively easy to recycle - and can be recycled time and time again. The UK has the capacity to

recycle about 900,000 tonnes of glass, which would fully satisfy its obligations - although there would have to be a significant increase in the collection of recycled material, from both commercial and domestic sources.

- 3.6 At the present time, glass packaging is primarily recovered from consumers rather than from commercial outlets. The Glass Materials Organisation estimates that there are already about 50,000 bottle banks spread over 20,000 sites throughout the UK, but it believes that a further 200,000 tonnes of glass could be collected through further expansion of the bottle-bank system. Between 300,000 and 400,000 tonnes of glass containerware are currently sold every year to pubs and other licensed outlets, but most of this ends up in landfill sites because there is no ready means of collecting it after use.
- 3.7 The glass processing market is very concentrated. There are four main companies which sort and clean collected bottles ready for manufacturing new glass products in the UK: Berrymans, the largest independent processor, which sells the recycle glass (or cullet) to the British Glass Recycling Company; United Glass, which uses the processed cullet itself; Glass Recycling (UK), which deals solely with P L M Redfearn; and Industrial Reclamations, a small processor in Kent.
- 3.8 The glass reprocessing market is also very concentrated. There are only seven reprocessors in the UK, three of which (P L M Redfearn, United Glass, and Rockware) currently reprocess about 90% of the UK's cullet. It is estimated that the construction of a new furnace would currently cost some £13 million.

## **Aluminium**

- 3.9 In 1996, the UK used around 116,000 tonnes of aluminium packaging, primarily in the form of cans, foil, aerosols, barrels, and collapsable tubes. Some 26,000 tonnes (22%) of this material are recovered, of which about 95% is recycled and 5% is recovered through waste to energy. Efforts to collect post-use aluminum packaging have been concentrated on beverage cans and foil which are recovered from household waste.
- 3.10 The infrastructure for collecting aluminium cans is well established. Around 78,000 tonnes of aluminium cans were used in 1995: of this total, some 23,900 tonnes (31%) were subsequently recycled. There are about 5,000 aluminium can banks in the UK, of which 4,000 are owned by local authorities, with the balance on retail sites. Sufficient collection infrastructure and reprocessing capacity for aluminium packaging is already in place to meet the UK's obligations: the key challenge will be to encourage consumers to increase the volume of packaging which is collected.

- 3.11 The UK consumes about 23,000 tonnes of single-material aluminium foil a year, the bulk of which is in the form of foil containers, household foil, and milk-bottle tops. Only around 350 tonnes of foil are recycled a year, mainly collected through voluntary schemes set up by charities and schools. The low weight of the material and its wide geographic distribution has meant that collecting it on a commercial basis has not proved viable.
- 3.12 Producing primary aluminium involves very high costs, but the recycling costs of secondary aluminium are low and the waste can be melted and reused indefinitely without loss of quality. The construction of a dedicated Alcan recycling plant near Warrington, with a capacity of about 60,000 tonnes a year, cost £28 million compared with the £300 million that would be required for a primary smelter. At present the plant has to recycle cans imported from Europe and the USA because not enough are collected in the UK. Alcan expects to increase the capacity of this plant to about 80,000 tonnes in the next two years. Aluminium foil is mainly recycled by Calder but there are a limited number of other firms in the secondary industry which also recycle small amounts of foil. Most recycled foil is used for cast components in cylinder heads in the automotive industry.

## **Steel**

- 3.13 Around 600,000 tonnes of steel packaging are used each year in the UK, either uncoated (steel drums, for example), or plated with tin or other lacquers to produce a sterile, rust-resistant product for food packaging. Steel is easily sorted and can be recycled at relatively low cost. Some 80,000 tonnes (13%) of steel packaging were collected for recycling in 1996 - mainly from household waste. Local authorities extract steel from incineration residue at waste-to-energy plants by the use of magnetic separation. It is estimated that the UK has the capacity to recycle up to 240,000 tonnes a year, and additional capacity will be needed to meet the UK's obligations, involving large-scale capital investment.
- 3.14 In 1996, the British Steel 'Save-a-Can' scheme, with 2,000 sites nationwide, collected some 6,000 tonnes of steel and aluminium cans. Commercial undertakings - public houses, clubs, restaurants, and garages, in particular - generate a significant amount of steel packaging but most of it is currently not recycled. British Steel has the capacity to recycle 100,000 tonnes of incinerated cans a year and as many de-tinned cans as can be collected. The steel can be recycled into coil and ingots for manufacture into other products. Tin-plating can be removed from cans to upgrade the steel. At present there are two de-tinning plants in the UK. Together they have the capacity to process about 35,000 tonnes of magnetically-separated material a year and produce about 30,000 tonnes of high-quality steel and 120 tonnes of tin.

## **Plastics**

- 3.15 Every year the UK uses about 1.8 million tonnes of plastic packaging, which primarily consists of flexible plastic film (carrier bags or pallet stretch) and rigid containers, such as bottles and intermediate bulk containers (plastic boxes, crates, and buckets). About 80,000 tonnes (4.5%) of this material were recovered in 1996. A significant increase in the quantity of plastic packaging recovered will be necessary if the UK is to meet its recovery and recycling targets. Post-use plastic packaging is generated both by commercial outlets (plastic film wrap and crates, used for transit packaging) and by households (although, since film wrap may be contaminated by food, only rigid containers are recycled). While the recycling of packaging film and crates is comparatively easy, higher capital investment is required to separate the polymers and produce high-quality recyclate from domestic waste.
- 3.16 Plastics reprocessing in the UK is a fragmented business, made up of some 120 separate firms. Two constraints limit the range of possible end products from recycled material: first, colour contamination - coupled with the high cost of adding new colour - means that such products must be a drab shade; and secondly, the possibility of bacterial contamination means that the material cannot be employed in the food and drinks industries - the very sectors which account for the bulk of virgin plastic packaging. At present, plastic recyclate is used to make such products as refuse sacks, benches, drainage pipes, coat hangers, flower pots, fibre filling, strapping, engineering plastics, carpet backing and floor tiles, garden and street furniture, window and door frames and fence posts, synthetic wood products, wheelie bins and composting bins.

### **Waste-to-energy schemes and composting**

- 3.17 Apart from recycling waste packaging as reusable material, both the European Directive and the UK Regulations provide for recovery to be achieved through conversion into energy. In this context, 'energy recovery' is defined as 'the use of combustible packaging waste as a means to generate energy through direct incineration with or without other waste but with recovery of the heat'.
- 3.18 Another possible means of recovery is composting, or 'organic recycling' - although it is not anticipated that this will play a significant role. Organic recycling is defined as 'the aerobic (composting) or anaerobic (biomethanization) treatment, under controlled conditions and using micro-organisms, of the biodegradable parts of packaging waste, which produces stabilized residues or methane'. For the purposes of the Regulations, landfill is not seen as a form of organic recycling. These alternative forms of recovery and recycling are not considered further in this advice.

## 4 THE VALPAK SCHEME

- 4.1 Valpak describes itself as a collective compliance scheme which will discharge its members' legal obligations to recover and recycle waste material and provide to the Environment Agency details of the aggregate obligation of its members. It is to be set up:

**on a cross-sectoral basis** - accepting as members, and discharging the obligations of, manufacturers, convertors, packers and sellers; and

**on a cross-material basis** - accepting as members, and discharging the obligations of, companies irrespective of the type or types of packaging material they handle.

- 4.2 The Valpak scheme will operate primarily through Valpak Ltd (a company limited by guarantee), whose function will be the purchase of sufficient evidence of compliance (in the form of PRNs) to discharge the aggregate obligations of its members. Valpak Ltd will be non-profit-making, and will calculate fees and levies so as to cover its overheads and raise sufficient resources to purchase the required PRNs. Valpak anticipates that there may be occasions where investment will be required in new waste-management infrastructure in order to meet the obligations of its members - by, for example, investing in new Material Reprocessing Facilities and co-operating with local authorities in the creation of new kerbside collection schemes. It intends to carry out such investments through establishing one or more subsidiaries that would be wholly owned by Valpak Ltd. These subsidiary companies would be limited by shares and may themselves be profit-making bodies.
- 4.3 Membership of the Valpak scheme is open to all companies, including those not currently obligated under the Regulations. Each member of the scheme will be required to enter into a separate contract, which will include obligations to supply necessary information and to indemnify Valpak against any loss incurred by the member's omission to supply such information.
- 4.4 To participate in the scheme, there is an initial one-off fee, payable when first registering with Valpak or when rejoining after a period of absence. The size of the payment is to be set by reference to the member's UK sales turnover for the year prior to joining, but it will be subject to a cap set at £15,000 until 31 March 1998. (General members who joined early paid a reduced fee - but see paragraph 7.27.) From 1998, members will pay an annual levy, based on the tonnage and composition of the packaging waste they put into the scheme. The levy will be payable quarterly and will be calculated by reference to the disclosed estimated level of packaging handled in the

preceding year. It will be adjusted retrospectively when accurate information on tonnage obligations and certificate costs is available.

4.5 Every member of the scheme will supply Valpak with data about its individual obligations. In turn, Valpak will aggregate this information in order to provide the Environment Agency with details of its overall obligation under the scheme, and will obtain evidence of recovery and recycling to meet the obligations of all its members. The primary operations under the scheme will therefore be:

- to enter into contracts with accredited reprocessors or other waste-holders (including members) in order to fund the recycling or recovery of packaging waste in exchange for evidence of compliance;
- to monitor the application of these funds in order to ensure that the necessary increases in recovery levels are being achieved; and
- to allocate the costs of compliance equitably among members.

4.6 Valpak does not expect to collect or reprocess any material itself, but will utilise existing expertise, organisations and facilities. The company says that its proposed approach is intended to incentivise existing organisations, and encourage a free-market, competitive approach in order to achieve the necessary recovery levels. In aiming to meet its members' overall obligations, it may, as stated, enter into contracts with the existing waste-collection and sorting industries, or with the waste-to-energy industry. These will mainly take one or other of the following forms:

- contracting directly with a reprocessor to receive the reprocessor's PRNs - with the prospect that the input of finance by Valpak might lead to the reprocessor increasing its reprocessing capacity in order to meet the demands of Valpak; and
- contracting with waste-management companies and local authorities to receive their PRNs - with the intention that this should lead to an increase in those bodies' collection activities as they seek to meet Valpak's requirements.

4.7 Members may leave the scheme by giving 90 days' notice terminating their membership - or, in 1997, on 31 December 1997 where notice is given less than 90 days before that date. They will then have to discharge their obligations individually or join another scheme.

4.8 Further details of Valpak's intended operations are given in the extract from the executive summary of its business plan reproduced in Annex B.

## **5 COMMENTS RECEIVED FROM THIRD PARTIES**

5.1 On 6 March 1997, my Office placed consultation notices about the Valpak scheme in the *Financial Times* and *Packaging Week* (see Annex C). In addition, it sent more than 200 consultation letters to potentially interested parties that it had identified. In all, it received 65 responses. In some cases, meetings were held with respondents who had asked to discuss the matter further. Both in the written responses and at the meetings, comments were made which focused on the Regulations themselves rather than specifically on the Valpak compliance scheme. There was particular anxiety about the issue and ownership of the PRNs mentioned in paragraph 1.6. The following sections summarise the views expressed by respondents.

### **Monopoly and first-mover advantage**

5.2 The primary concern - repeated throughout the consultation - was that, potentially, Valpak could be the only compliance scheme in operation when the Regulations came into effect, and that this factor would enable it to establish a dominant position in the market.

### **Exclusive contracts**

5.3 A second (and related) key consideration was the possibility that Valpak could tie up a large proportion of the UK's available reprocessing capacity, making it difficult for those outside the scheme to meet their obligations. It was also suggested that the problem might get worse as additional companies become obligated in the year 2000.

### **Limits on membership numbers**

5.4 There was some anxiety about references in Valpak's recruitment literature to the possibility of having to place an upper limit on the number of members admitted to the scheme. It was felt that this could lead to 'cherry picking' - accepting membership applications from those whose generated waste and obligations could be handled relatively easily, and rejecting those with more difficult reprocessing requirements.

### **The question of 'own waste'**

5.5 When the consultation process began, there was some apprehension that the method of dealing with obligated companies with their own waste supplies had not been clarified. Upstream companies (such as convertors) objected to the possibility of downstream companies (such as retailers) receiving what they saw as preferential treatment in terms of reduced charges due to the own waste that they could bring to

the scheme. Conversely, retailers wanted to receive some credit - in the form of reduced costs - for reprocessing any of the packaging waste which they themselves had generated and subsequently retrieved.

### **Valpak's board structure**

- 5.6 There was some concern (mainly among upstream companies) that the structure of Valpak's board could lead to the packer/filler and retail end of the packaging chain being given greater weight in setting the objectives of the company than the upstream companies such as the suppliers of raw material and the converters of packaging materials.

### **Cross-subsidisation**

- 5.7 There was also anxiety that Valpak's charging structure would allow cross-subsidisation both between and within materials, thereby distorting competition between the different waste streams.

## **6 OTHER COMPLIANCE SCHEMES**

- 6.1 My Office has received formal notification of three other nationwide schemes, on which it has invited third parties to comment by placing notices in the trade and national press in similar terms to those in the notice on the Valpak scheme (see Annex C). It is also aware of a number of small-scale schemes and other potential national schemes, some of which may not ultimately succeed. In due course, I shall offer advice on the competition scrutiny of each of the schemes that have been formally notified. The following sections give brief details of such schemes that have been so notified and consulted on at the time of writing.

### **Difpak**

- 6.2 Difpak is a scheme set up by the Dairy Industry Federation (DIF). The Federation has said that, while its own members are seen as the primary participants in Difpak, it will be prepared to discuss entry to the scheme with non-members of DIF. The scheme will purchase sufficient PRNs from reprocessors to meet the obligations of all its members in return for a fee covering the purchase costs. Difpak is a non-profit making company, limited by guarantee. Day-to-day management will rest with a board of directors with a maximum of seven members. Two directors will be appointed by DIF and three by scheme members - with those five then appointing a further two directors. Initial start-up costs will be borne by DIF and on-going costs by the members of the scheme.

### **Biffpack**

- 6.3 Biffpack is a compliance scheme to be operated as a discrete unit within Biffa Waste Services Ltd, an existing waste-collection and waste-management company. Membership of the scheme will be cross-sectoral, multi-material and unrestricted. Biffa already has a significant waste-collection infrastructure in place, and waste collected from unobligated companies will be used to offset members' collective obligation, together with members' own-waste arisings. The fee for membership in 1997/98 will be charged on the basis of the cost per member of the Environment Agency registration plus an additional charge to cover running costs. From April 1998, membership will be charged on the basis of an annual subscription plus the cost of acquiring evidence of recycling and recovery to meet the shortfalls of the scheme. These costs would be charged back to members on an apportioned basis against the net obligation they brought to the scheme. It is intended that existing working relationships with reprocessors and local authorities will be used to enhance present recovery levels.

## **Wastepack**

- 6.4 Wastepack is a scheme established by Wastelink Ltd, an existing waste-collection and waste-management company. Wastepack UK Ltd is a private registered company, limited by guarantee. The Wastepack scheme will be multi-material, with unrestricted membership, and starts from the premise that there must be a demand and market for the recycle. Wastepack will therefore negotiate free issue of PRNs to the scheme in return for direct investment of its membership fees in the development of the reprocessors' recycled product markets, or in venture funding of new technologies and capacity. At present, Wastelink collects about 10 million tonnes of waste from existing clients. Of that total, it estimates that 2.5 million tonnes comes from non-obligated companies, and it believes that this material will be sufficient to meet any shortfall of PRNs within the scheme. Any further shortfall will be raised via the application of a tonnage levy on members. Start-up costs will be provided by Wastelink.

## 7 ASSESSMENT

### **Monopoly and first-mover advantage**

7.1 My principal concern is that Valpak may be the only significant compliance scheme operating on a national basis for all sectors and that as a result it will have scope to operate at lower levels of efficiency and charge its members excessive rates. In its submission to my Office, however, Valpak argued that it will face competition from four types of operators: other compliance schemes, companies adopting the individual compliance route, a developing market for PRNs, and existing waste-management companies.

### *Other compliance schemes*

7.2 The most direct form of competition Valpak is likely to face will come from other cross-sectoral national schemes, although it will also face some competition from small single-sector and geographically-limited schemes. Since it consulted on Valpak, my Office has also consulted on two other cross-sectoral national schemes (Biffpack and Wastepack) and these clearly have the potential to compete with Valpak. At present it is too early to assess whether these schemes will, in practice, offer effective competition, first, because they have yet to obtain regulatory clearance and, secondly, because there is concern that Valpak may benefit from a significant ‘first-mover’ advantage.

7.3 This advantage arises primarily because Valpak is the only scheme which has been closely involved in the development of the Regulations and because at one stage it was envisaged that it would operate as the national scheme for all obligated firms. Valpak can therefore be expected to have a head start in terms of understanding the Regulations, designing and setting up a compliance scheme, and in building up contacts in the waste-collection and processing industries. Furthermore, it is likely to have benefited from the high-profile role it has played and, as a result, may find it easier to recruit new members. Prospective members may also perceive alternative schemes as being comparatively weak and less likely to obtain regulatory clearance.

7.4 While other cross-sectoral national schemes may develop in due course, it is arguable that the regulatory requirements for setting up a compliance scheme, in terms of obtaining positive clearance, may deter potential schemes and provide existing schemes with a degree of protection. Once a scheme has obtained clearance, however, it should - at least theoretically - be able to compete with Valpak for its members because members of the Valpak scheme are able to terminate their membership by giving 90 days’ notice.

## *Individual compliance*

- 7.5 Under the Regulations, there is no compulsion to join one of the independent compliance schemes. Individual companies are free to make their own arrangements to discharge their obligations and can go it alone. Valpak has suggested that the existence of this option will act as a constraint on the level of its charges because firms will research and compare the costs of individual compliance with the costs of joining a scheme. At this stage, however, it is impossible for firms to make such a comparison because several issues remain unclear - including, for example, how much reprocessors will charge for PRNs. For the present therefore, an informed decision based on costs is likely to be very difficult.
- 7.6 Comments my Office has received from third parties suggest that many firms do not consider individual compliance as a close substitute for joining a scheme. The key difference is that, as an individual complier, a firm retains its legal obligation to recover and recycle packaging waste and the associated risk of criminal charges should it fail to meet its obligation. There is some inevitable shortfall in the UK's reprocessing capacity when set against its overall obligations, and there is therefore considerable uncertainty about whether there will be sufficient PRNs to discharge the overall obligation. Obligated companies may be particularly reluctant to retain their legal responsibility in the face of this uncertainty and they may therefore place considerable weight on joining a scheme. They may also feel that they do not have the staff or the expertise to organise the discharge of their obligation themselves and be attracted by the convenience of passing these responsibilities on to a scheme.
- 7.7 The importance of security and convenience will vary among different firms and it is difficult to judge how much weight individual companies will place on these factors. The comments received from third parties have, however, suggested that they may be a significant consideration. To the extent that such responses are likely to be representative of obligated firms generally, it would appear that the option of individual compliance will provide only a weak constraint on the levies charged by compliance schemes.

## *A market for PRNs*

- 7.8 Valpak anticipates that a market for PRNs will develop, and that it will therefore face competition from traders selling PRNs to obligated companies. The option of dealing with such traders essentially falls for consideration by firms following the individual route (although purchases by schemes cannot be ruled out), and it is therefore subject to the same considerations of how significant the security and convenience benefits gained by joining a compliance scheme are perceived to be. Where such benefits are seen to be significant, trading in the market is unlikely to be an attractive option and equally unlikely to be a constraining force on compliance schemes.

### ***Waste-management companies***

- 7.9 Valpak anticipates facing competition from existing waste-management companies. These firms already have a well-established waste-collection infrastructure in place and may therefore be in a strong position to obtain PRNs from reprocessors. Such companies would be able to offer the convenience of a ‘one-stop shop’ and could obtain PRNs to meet individual client firms’ total recovery and recycling obligations. If this were to come about, the service offered by such companies would be likely to prove a closer substitute for membership of a compliance scheme than the individual route or buying PRNs from traders. Some firms, however, will feel confident of being able to discharge their obligations under the Regulations only by joining an established compliance scheme and, to the extent that this is a significant factor, the services offered by waste-management companies are unlikely to act as a constraint on such schemes.

### ***Excessive levies and lower efficiency***

- 7.10 If Valpak were to dominate the market without any, or any significant, effective competition from any of the sources identified in this report, it may have the scope to operate at a lower level of efficiency or charge its members excessive levies. The former appears to be the more likely risk since the fact that Valpak has been established as a non-profit-making organisation reduces its incentive to raise excessive charges. I note, however, that the company may later set up profit-making subsidiaries, probably in the form of joint ventures, if it should become necessary to invest directly in collection or recovery capacity. But I further note that Valpak has no immediate plans to make such investments and intends initially to seek to inject monies in the reprocessing system through the purchase of PRNs with the aim of stimulating a level of reprocessing sufficient to enable it to discharge its aggregate obligation. In the longer term, however, Valpak has reserved the right to set up profit-making subsidiaries because it believes that, where investment in extra capacity does prove to be necessary, commercial undertakings would not put money into any joint ventures if they did not yield a return.

### ***Exclusive contracts***

- 7.11 Another key concern is that Valpak may tie up a significant proportion of post-use packaging waste or recovery and reprocessing capacity through the use of exclusive contracts, so forcing firms to join the scheme in order to discharge their obligation. This point assumes particular significance when considered in conjunction with Valpak’s first-mover advantage. If the company does enjoy a significant advantage in this respect, and establishes a dominant position, then it is likely to be in a stronger position to tie up a significant proportion of capacity. Where capacity is limited or

highly concentrated it could be relatively easy to foreclose large parts of the market and distort competition.

- 7.12 Valpak says that, unless it is directly investing in increased capacity, it does not envisage seeking exclusivity as a condition of entering into a contract with a waste holder or reprocessor. The company has no immediate intention of making such direct investments; instead, it plans to set up contracts for specific volumes of waste or for PRNs with the aim of stimulating the necessary investment by the reprocessing industry itself. Valpak has assured my officials that its objective will always be to match its obligation with its reprocessing contracts and that it will not intentionally contract for excess PRNs. I place considerable weight on this assurance.
- 7.13 It would certainly be helpful if a reprocessor who accepts waste material for recycling were obliged to issue a PRN for that material on request. That would inevitably limit the ability of compliance schemes or others to tie up all, or a significant proportion of, the available reprocessing capacity in a particular waste stream or in a restricted geographical area.

### **Own waste**

- 7.14 Although regulations 4(b) and 13(a) prevent individual members of a compliance scheme from using their own waste to offset their recovery and recycling obligations, they are permitted to bring evidence of recovery and recycling (in the form of PRNs) to a scheme. Valpak's membership contract will define the basis on which Valpak will acquire own-waste PRNs from its members, but, in principle, it will allow members who have such PRNs to bring them to Valpak and offset them against their obligations on 'compliance cost neutral' terms (that is to say at no additional cost to individual members). At the beginning of the year, each member will be required to notify Valpak of the level of own waste that it expects to accumulate during the course of the next 12 months, and PRNs may be supplied during that year up to the anticipated level. The reference to firms not accumulating own-waste PRNs in Year 2 for volumes which are greater than the volume accumulated in Year 1 mirrors the requirement in the Regulations that obligations are based on the previous year's figures.
- 7.15 Evidence about own waste will be accepted only from scheme members who obtain packaging waste in the course of their normal trading activities. Examples of qualifying PRNs include those obtained from the collection and reprocessing of a member's own post-use waste arising on its premises, and the reprocessing of packaging waste by a member where it is a reprocessor accredited by the Environment Agency. The policy does not apply to PRNs acquired on the open market or for waste acquired by a member which is unrelated to its normal business activities.

- 7.16 I would have been concerned had scheme members who expanded their own waste-recovery levels been unable to offset this increase against their obligation, so finding themselves at a disadvantage by comparison with their competitors. Valpak has, however, told my officials that it would have no objection to a company year by year increasing the level of own-waste PRNs it brought into the scheme - it would, in fact, encourage this. If a firm were to generate more PRNs than were necessary to discharge its individual obligation, the excess could be 'sold' to the scheme, provided that this had been agreed in advance.
- 7.17 I would also have been concerned if there had been variations in the conditions under which own waste was accepted from different members. Valpak has, however, told my officials that all those members with own waste will be dealt with on the same basis, so ensuring that there is equal treatment within this group. The company will allow such members to provide evidence of compliance in respect of their own waste, and this will be offset against their individual obligation. In other words, those members will supply Valpak with the qualifying PRNs, and then pay a material levy for their remaining obligation at the normal Valpak rates. Valpak says that this will ensure that members who do not deal with their own waste do not unfairly cross-subsidise those who do, and will safeguard equitable treatment between all members.
- 7.18 Some upstream companies, such as convertors, told me that they were concerned that downstream companies, such as retailers with access to their own waste arisings, would receive preferential treatment. It could be argued that this potential bias has been recognised in the Regulations themselves, since they impose a higher obligation on retailers in terms of the percentage of packaging waste recovery and recycling for which they are responsible. In some senses, the argument relates more to the Regulations than to compliance schemes. Retailers with access to their own waste would benefit either inside or outside a scheme. I do not believe that other members of the scheme will subsidise the retailers: the latter would still have to pay for the required PRNs from the scheme in addition to those which they obtained themselves.

### **Cross-subsidisation**

- 7.19 In response to concerns expressed about the possibility of cross-subsidisation occurring both within and between types of packaging material, so distorting competition between different materials, Valpak has told my officials that its levy will be based on individual tonnage and the composition of the obligation. The Regulations allow for a degree of flexibility in meeting obligations because the recovery targets are not specific to particular materials. This means, for example, that an obligated company using a significant tonnage of plastic packaging, might be able to discharge all of its recovery obligation by obtaining PRNs for paper, glass or metal. Although an obligation in one material can be satisfied in part by the recovery of

another, Valpak says that it is its intention that cross-subsidies (where the costs of one material are raised in order to lower the costs of another) are avoided.

7.20 The rules which Valpak will use to implement its costing principles are:

a it will allocate the lowest contracted **recycling** costs in each material to satisfy the minimum material-specific recycling obligations of all members in that material (7% in 1998, rising to 16% in 2001);

b it will divide the remaining contracted **recovery** costs (whether by recycling, composting, or waste-to-energy) to satisfy members' obligations up to the overall recovery target (38% in 1998, rising to 52% in 2001) by:

giving priority to low-cost recovery in a particular material to members with obligations in that material; and

- once the target has been reached in a particular material - distributing the cost of any spare recovery evenly among members with obligations in other materials; and

c it will share the cost of any surplus recovery evenly between members in proportion to their obligation (although there is not expected to be any surplus in the short to medium term).

7.21 Valpak is therefore attempting to minimise the degree of cross-subsidisation and distortion of competition between different packaging materials. There may, however, still be some distortion if general funds received from all members are used to invest in additional capacity in specific materials.

7.22 Competition could also be distorted by cross-subsidisation if Valpak obtained a very significant proportion of available PRNs for a particular material. If, for example, Valpak secured the vast majority of plastic recycling PRNs, it might have scope to increase the charges for those companies with plastic recycling obligations and reduce the charges for glass or paper PRNs to attract members from competing schemes. At this stage this concern is speculative but is an area which I will keep under review.

7.23 I have also considered the possibility that Valpak might be able to use cross-subsidisation to distort competition in other markets. Again, by way of example, if Valpak had among its members two firms which competed in the same product market and which it charged different levies for the recycling or recovery of the same tonnage of the same material, it could distort competition between those two members. As I have stated, however, Valpak has told my officials that for a given material, the cost per tonne of obligation for that material (for recycling or recovery)

will be identical for all members. There should, therefore, be no discrimination between members.

### **Pooling of resources**

7.24 The Valpak structure permits the ‘pooling’ of resources by businesses which might otherwise compete with each other in the purchase of evidence of compliance; it also makes it unlikely that such businesses would compete in the creation of a waste management infrastructure designed to stimulate an increased availability of such compliance evidence. This issue is a feature of the Regulations and links back to my earlier concern about the requirement that a company’s entire obligation should be brought to a scheme. As the Regulations stand at present such ‘pooling’ of resources by compliance schemes is encouraged.

7.25 I note that Valpak’s members will not be prevented from investing in the waste management industry should they so wish. Such investment could perhaps be made with a view to leaving the scheme at some later date.

### **Limits on membership numbers**

7.26 In response to the concerns expressed about the cherry-picking of members, Valpak told my officials that membership is open to all on a first-come, first-served basis. It would be refused only if the company anticipates being unable to discharge the obligations of its existing members because of a lack of available evidence on compliance. There should therefore be no scope for existing members to discriminate against competitors who apply for membership of Valpak.

### **Valpak’s obligation not to terminate founder member agreements until 2001**

7.27 Designated ‘founder members’ (as distinct from general members) have been assured that their membership of the Valpak compliance scheme is guaranteed until 2001 because they were expected to invest heavily in its start-up costs through the payment of an increased joining fee (invitations for which were issued without discrimination). These members have also been given a place on the company’s Advisory Council which is described as a ‘think tank for developing ideas designed to increase long-term cost-effective recovery by Valpak’. I have, however, been told that the Advisory Council will not exercise any executive control, and that it is intended to capitalise on the expertise of scheme members without giving them rights which could distort the scheme in their favour. Executive decisions on policy matters will be taken by the Valpak board or by its members, and the scheme’s founder members will have no special vote when such decisions are made.

7.28 Valpak has also said that the founder members' guarantee of membership would come into play only if there were to be major problems with overall capacity and the scheme needed to reduce the number of members in order to meet its commitments. The guarantee does not affect the general right of founder members to leave the Valpak scheme on 90 days' notice should they want to do so.

### **Valpak's board structure**

7.29 Valpak says that its board structure entitles all members - irrespective of the materials they generate or their particular waste streams - to receive constitutional rights to fair treatment under its Articles of Association; in particular:

in relation to constitutional matters, one vote per tonne of packaging waste handled;

the right to vote on the appointment of the 14 board members of Valpak.  
Board members will be appointed as follows:

two votes per sector (one vote per member);

two non sectoral (one vote per tonne handled);

two non-executives (elected by the board);

chairman and chief executive (elected by the board).

7.30 Some concern was expressed to me about the danger of the board becoming too heavily weighted in favour of particular members of a waste stream. This could occur if the two non-sectoral directors were appointed on a tonnage-of-obligation basis as they were most likely to be elected from the numerically stronger packer/filler and retail end of the chain, which have the highest tonnage obligations. It was also suggested to me that as all votes are made on the basis of tonnes of packaging handled, certain classes of members could be in a position to influence Valpak's overall structure and operation. This issue appears, in part, to reflect long-standing arguments about the benefits which downstream members of the packaging chain gain at the expense of their upstream counterparts.

7.31 The board structure appears to be one method of accounting for the differing demands of the scheme's members, as does the scheme's voting procedure. I believe, however, that Valpak's stated policy of not discriminating between members in terms of levies charged per tonne of material, the criteria for accepting new members, and members' own waste, will restrict the ability of board members to abuse their position and discriminate against their competitors.

## **8 CONCLUSIONS AND RECOMMENDATION**

### **Valpak dominance**

- 8.1 If Valpak were to establish a dominant position and did not face effective competition from any of the sources that have been identified, two potential detriments may arise. First, it may have scope to earn monopoly profits by charging its members excessive fees. Secondly, it may be less efficient and operate at higher cost than would otherwise be the case.
- 8.2 The incentive to charge excessive rates may be limited because the basic compliance scheme has been set up as a non-profit-making operation. Nevertheless, if - in due course - it were to become necessary to make direct investment in recovery or reprocessing capacity, Valpak envisages that there might be a possibility of setting up subsidiaries which would be profit making. While I would not necessarily object to a scheme being involved in profit-making activities, I would be concerned if the opportunity to make profits were to be combined with a dominant position in the market.
- 8.3 It appears to me that there will be a greater risk of increased inefficiency if Valpak is not subjected to the market pressures created by effective competition. But, at this stage, it is difficult to predict the level of competition Valpak will face from other schemes or from existing waste-management companies. How much weight firms will place on their own ability to discharge their legal responsibility and on the convenience which compliance schemes (and, possibly, waste-management companies) can offer is unquantifiable. Neither is it clear how the setting up of profit-making subsidiaries will interact with the possible dominance of Valpak in the market. If other schemes do establish themselves, and other forms of competition exist and (more to the point) prove to be effective, concerns about monopoly profits and inefficiency may prove to be unfounded. This is an area which I will monitor carefully as the Regulations come into full operation.

### **Exclusive contracts**

- 8.4 My concern about exclusive contracts takes on particular significance against the background of concerns about Valpak's potential first-mover advantage. While dominance of the market may be relatively short lived, any exclusive contracts are potentially of much more long-term importance. If Valpak were to become established as the dominant compliance scheme with a significant proportion of all the obligated companies as members, it might have the funds and bargaining power to enter into exclusive contracts with waste holders and reprocessors. If capacity were limited or highly concentrated, it would be relatively easy to foreclose large parts of

the market with the result that firms may have no choice but to join Valpak, in order simply to discharge their obligation.

- 8.5 I should be very concerned if Valpak (or any other compliance scheme or business operation) tied up a large proportion of available waste or reprocessing capacity in, for instance, a particular material or a particular region, either explicitly through exclusive contracts or implicitly through contracts for an unacceptably high proportion of waste-collection or reprocessing capacity. Such action would clearly create difficulties for firms that were seeking to meet their obligations outside the particular scheme, and would enable those that did manage to secure access to scarce PRNs to charge excessive amounts for the valuable resource. Again, this is an area that I will monitor very closely, but I am likely to look unfavourably on any attempt to tie-up reprocessing capacity in a particular waste stream or region. I should also be very concerned if a compliance scheme were to enter into contracts for reprocessing capacity which were in excess of the scheme's overall PRN requirement. Valpak has told me that it will guard against this possibility in its scheme, and I welcome this assurance.
- 8.6 Many of my concerns, both about exclusive contracts and about the possibility of one or more schemes being in a position to secure high prices for scarce PRNs, would, however, be alleviated if the firms which deliver waste to reprocessors were entitled to a PRN on request, as I have suggested. That would immediately limit the ability of a dominant scheme to tie up reprocessing capacity.
- 8.7 It may, of course, be the case that contracts for PRNs between schemes and reprocessors will fall for consideration under the Restrictive Trade Practices Act 1976. If that should be so, they will be looked at as the Regulations prescribe.

### **Own waste**

- 8.8 It appears that Valpak has developed a satisfactory method for dealing with the issue of member companies with their own waste arisings. I welcome the company's assurance to me that all members will be treated equally on this issue and, although it is true that some will benefit more than others, those that gain more from the own-waste arrangements (such as retailers) do have a higher obligation under the Regulations. It is also true that retailers with access to own waste would benefit under the Regulations either inside or outside a scheme. I note that the precise arrangements for own waste will be the subject of discussions between individual members and Valpak. I shall, of course, expect that, in the course of those discussions, Valpak will treat all members on an equal basis.

8.9 I also welcome the fact that members will be able to expand and increase their levels of own-waste collection on a year-by-year basis, and will not therefore be disadvantaged by comparison with their competitors outside the scheme.

### **Cross-subsidisation**

8.10 I am content with Valpak's intention to minimise the degree of cross-subsidisation between waste streams, as has been outlined to me. I particularly welcome the company's proposal to go beyond the requirements of the Regulations to give priority, in terms of lower recovery costs, to members with an obligation in any given material.

### **Pooling of resources**

8.11 I regard the pooling of resources as a natural effect of the Regulations. Members of a compliance scheme would not normally be expected to promote the waste-management infrastructure other than through the scheme to which they belong. I note that members are not prevented from making such investments should they so wish.

### **Limits on membership numbers**

8.12 Valpak has assured me that membership is open to all, on a first-come, first-served basis. I recognise that there may be situations where, because the access to reprocessing capacity is limited, membership may have to be refused, but I have been told that any such decisions will be taken only on a fair, equal and non-discriminatory basis.

### **Founder member agreements not to be terminated until 2001**

8.13 I do not believe that the benefit of guaranteed membership for a limited period granted to founder members will have an adverse competitive effect. I note that the founder members are given no additional rights which would enable them to discriminate among or against members and thereby distort competition.

### **Valpak's board structure**

8.14 Valpak's board structure and decision-making process appears to be one method of accounting for the differing demands of members. While certain classes of members may find themselves more heavily represented on the board and with more favourable voting rights, Valpak's stated policy of not discriminating between members in terms of levies charged per tonne of material, the criteria to be adopted for accepting new

members, and the handling of members' own waste, will restrict the ability of board members to abuse their position and discriminate against competitors.

### **Effects of other schemes**

- 8.15 As recorded in Chapter 6, my Office has published notices in the trade and national press seeking the views of third parties on three other compliance schemes which have been formally notified to me: Difpak; Biffpack; and Wastepack. Because details of these schemes were notified to me later than those relating to Valpak, I am not yet in a position to advise to the Secretary of State on the results of my competition scrutiny of them. Nevertheless, I hope that it will be possible for me to submit my advice in sufficient time for the schemes to be considered for registration by the appropriate agency by 31 August 1997. That will mean that there will be some competition between different schemes and that obligated companies will have some choice of which scheme to join if they do not follow the individual compliance route. The very existence of other schemes will mean that the dominance of any one scheme will necessarily be diluted.
- 8.16 I fully recognise that, for a variety of reasons, other schemes may not achieve registration by 31 August. The Regulations will not in the respects to which I have referred prevent or hinder any attempt to take advantage of a monopoly position. From the information available to me about Valpak's intended method of operation and policies, and from statements it has made to me or to my officials, however, I do not believe that it would seek to abuse the position in which it found itself, or to attempt deliberately to restrict, distort or prevent competition, if it were the only scheme in operation.
- 8.17 I am, however, required by the Regulations to continue to monitor the market into the future. I shall carry out that role vigorously, particularly if any evidence comes to my notice that a dominant position held by any compliance scheme is being abused, or that competition is being restricted, distorted, or prevented. If I do conclude that there are signs of any such action, I shall not hesitate to recommend appropriate remedial action.

### **Recommendation**

- 8.18 I therefore recommend that you should advise the Environment Agency, in accordance with regulation 31(5), that you are satisfied that the Valpak scheme meets the requirements of the competition scrutiny.

July 1997

**John S Bridgeman**  
**Director General of Fair Trading**



# ANNEXES

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## A TYPES OF WASTE PACKAGING MATERIAL

### PAPER

- A.1 Paper and board are the most widely used of all packaging materials and the Paper Industry Materials Organisation estimates that there was a total of 3.6 million tonnes of paper packaging waste in the waste stream in 1996. Packaging products made of paper and pulp comprise mainly sacks and bags and those made of board comprise mainly fibreboard packing cases, rigid boxes and cartons.
- A.2 The main users of primary paper and board packaging are the food and drink industries which account for around 40% of demand. Other key users include the tobacco, chemicals, pharmaceuticals, cosmetics, toiletries, footwear, DIY and engineering components industries.

### Recovery

- A.3 Recycling is the main method of recovery of paper and board packaging and in 1996, 1.4 million tonnes were recycled (39% of all paper packaging). In addition about 75,000 tonnes (2%) were recovered through energy from waste.

### Collection

- A.4 Paper and board primary packaging collected from mixed household waste tends to be contaminated and is best used for waste to energy recovery rather than recycling. Secondary packaging waste collected from kerbside systems or from 'bring' systems tends to be clean and more suitable for recycling. Transit packaging is generally easy to separate and collect and it is estimated that about 70% is recovered and recycled, a significant proportion of which is obtained from retailers' back doors. The collection of paper and board from these commercial outlets is mainly carried out by waste paper merchants which collect, sort and bale the waste paper and board into internationally recognisable standards according to the nature of the content and the percentage of objectionable materials. The sorting of waste paper is still carried out most effectively by hand and, as a result, is not a capital intensive business.
- A.5 There are about 120 waste-paper merchants in the UK, dominated by 10 large firms which are owned by the paper mills. These account for about 75% of the collected waste paper. The remaining merchants are a fringe of independent and typically

small, local, 'family run' businesses. Once the paper has been sorted and baled it is an internationally tradeable commodity and may be transported to paper mills in the UK or abroad (France and the Far East, in particular).

- A.6 Increased collection will be necessary for the UK to meet its obligation and this is likely to involve increased collection of smaller lots from high street outlets.

## **Reprocessing**

- A.7 The Department for the Environment, Transport and the Regions (DETR) defines reprocessors as the paper mills, loft insulation and animal bedding firms. Only very small quantities of paper are used for animal bedding and safety concerns about possible contamination from printing inks suggest that this alternative use will be limited. Paper and board can be recycled relatively easily because the fibres can be processed to exclude contaminated products. As a result, reclaimed fibre is a very important source of raw material for paper and board manufacturers, accounting for about 70% of the raw materials used. Unlike glass and metals, however, paper and board can be recycled only a limited number of times before the loss of quality is too great. It is possible to produce high quality board from 100% waste. The majority of packaging waste is recycled into corrugated case material for sale to box manufacturers.
- A.8 When the bales arrive at a board mill they are put through a washing machine to remove large contaminants such as baling wire, rope, and other foreign bodies. The bales are then put through cleaning and screening processes to separate pulp from sand and rocks. All material which is initially rejected by the two processes is put through again and again until the maximum amount of pulp has been extracted. The pulp is then pressed and dried, a process which sterilises the pulp. The paper mills typically try to use as much of the relatively cheaper recycled fibre and as little of the more expensive pulp as possible.
- A.9 The paper packaging reprocessing industry in the UK is very concentrated. There are only eight board mill groups, dominated by four major groups which together account for about 60% of recycling: Smurfit, St Regis (David H Smith), SCA, and British Plasterboard. These board mills use different grades of waste as well as different equipment compared with tissue mills and are therefore not considered as supply-side substitutes.
- A.10 It is estimated that the cost of building a new board mill with a capacity to recycle 40,000 to 50,000 tonnes a year is £250 million - £300 million.
- A.11 The paper and board industry in general anticipates that the recycling target will be met largely through increased recycling of corrugated packaging, the single largest

component of the packaging stream by weight. There is, however, a limited range of end products for recycling of paper and board. Alternative potential uses being explored include mouldings or non-woven mats (made from wood-based composites blended with thermoplastics), insulating and acoustic boards (paper fibre materials) and wall boards (bonded wood products).

## Summary

- A.12 Paper is considered to have an advanced recycling infrastructure already in place and collection could be increased relatively easily. A constraint will be the limited range of end products for the recycled waste paper, although this could be alleviated if it proved economical to export graded packaging waste for recycling in countries in the Far East.

## GLASS

- A.13 The UK produces about 1.9 million tonnes of glass packaging each year,<sup>1</sup> consisting of containerware for liquids, semi-solids, grains, granules and powders. The principle applications are in the food and drinks industries, which account for about 80% of demand, as well as the pharmaceutical, perfume, cosmetic and toiletries sectors.

## Recovery

- A.14 In 1989 about 188,000 tonnes of glass packaging were recovered in the UK. This increased rapidly to about 361,000 tonnes in 1993<sup>2</sup> but has reached a plateau since then and is currently about 430,000 tonnes a year (about 23% of glass packaging). All of this glass is recycled because it is not possible to recover energy from the incineration of waste glass. Glass packaging is primarily recovered from consumers rather than commercial outlets.
- A.15 Glass goes through three stages in the recycling process: the collection of post-use glass containers (cullet); processing of the cullet; and the manufacture of new glass products (reprocessing). There are strong vertical links between the second and third stages.

## Collection

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1 *Source:* The Glass Materials Organisation. Domestic production figures, but imports and exports are approximately equal.

2 *Opportunities and Barriers to Glass Recycling*, A J Poll, AEA Technology report, 1995.

### *Domestic sources*

- A.16 The majority of post-use glass is collected through the network of bottle banks and sorted by the public according to colour: clear (white flint), amber, or green. The Glass Materials Organisation estimates that the UK has about 50,000 bottle banks spread over 20,000 sites; it costs about £800 to £900 to set up three bottle banks on a single site. There are also a limited number of kerbside collection schemes: a scheme in Milton Keynes covers 70,000 households and sorts the glass at the kerbside. The majority of bottle banks are owned by local authorities, many of which have contracts with the British Glass Recycling Company (BGRC). BGRC is a joint venture company owned by two of the three major glass containerware manufacturers in the UK, United Glass and Rockware. BGRC buys the cullet and arranges for it to be sorted and cleaned by other companies before it is delivered to container manufacturers. Each container manufacturer tells BGRC how much it pays per tonne of virgin raw materials and pays BGRC the same amount per tonne of cullet.
- A.17 The third major glass containerware manufacturer, P L M Redfearn, has its own bottle banks, situated in the North East of England. It contracts with Glass Recycling (UK) Ltd, a waste management company, to collect, process and deliver cullet to Redfearn's factories.
- A.18 The Glass Materials Organisation estimates that an additional 200,000 tonnes of glass could be collected through expansion of the bottle bank system, together with increased local information to encourage more consumers to deposit bottles in the banks.

### *Commercial sources*

- A.19 Approximately 300,000 - 400,000 tonnes of glass containerware are sold to public houses and other licensed outlets, the majority of which ends up in landfill sites: prior to the introduction of the landfill tax and these Regulations, it was cheaper and more convenient to contract waste management firms to remove all their waste together to be deposited in a landfill site. Consequently, no collection infrastructure has evolved.
- A.20 There are now a small number of schemes which collect glass from commercial sources: Glass Recycling UK, for example, has a contract with Whitbread to collect glass from its 300 Boland Inns in north west England for P L M Redfearn.<sup>1</sup> Other companies have been reported to be setting up similar schemes: Biffa Waste Services operated a two months trial scheme in north west London which collected cullet from Allied Domecq, Scottish and Newcastle and Bass outlets which it now intends to

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1 *Materials Recycling Week*, 11 April 1997.

increase as well as set up a similar scheme with Greenalls in Manchester.<sup>1</sup> The Local Authority Recycling Advisory Committee is also reported to have been liaising with the Brewers and Licensed Retailers Association about possible means of increasing the amount of commercial glass recovered.<sup>2</sup>

- A.21 It is likely that a larger proportion of commercial glass will be collected for recycling in the future. To be economical, dense collection networks are needed and the glass needs to be collected separated into the three colours.

## **Processing**

- A.22 Once the cullet has been collected it needs to be sorted, cleaned and processed. Sorting to remove contaminants such as china, ceramics and plastic bottles typically takes place by hand. Newer plants have ceramic separators which use either laser generated or light screening beams to remove non-glass objects by air jets. These machines are estimated to cost £300,000 - £400,000 and have a minimum economic scale of about 50,000 tonnes. The cullet passes through a metal detection and separation system to remove metal contaminants such as closures before it is crushed and screened, a process which also removes labels and aluminium foils.
- A.23 The glass processing market is very concentrated, although the extent of the geographic market is not clear. There are four main companies which sort and clean the collected bottles ready for manufacturing new glass products in the UK: Berrymans, the largest independent processor which sell its cullet to BGRC; United Glass, which uses the processed cullet itself; Glass Recycling (UK) which deals solely with P L M Redfearn; and Industrial Reclamations, a small processor in Kent.

## **Reprocessing**

- A.24 Glass is comparatively easy to recycle and can be recycled indefinitely without loss of quality, provided the impurities are removed. There are, however, limits to the proportion of cullet which can be included in the raw materials for new containers - currently about 25% for clear glass, 50% for amber glass, and 80% for green glass.
- A.25 The DETR defines a glass reprocessor as a glass manufacturer (a business producing the molten glass or another product from cullet). This market is highly concentrated, with only seven reprocessors, three of which - United Glass, Rockware and P L M Redfearn - reprocess nearly 90% of the cullet which is collected. The majority of the plants are based in the north of England, although United Glass has a plant in Harlow,

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1 *Materials Recycling Week*, 25 April 1997.

2 *Materials Recycling Week*, 11 April 1997.

Essex which also has in-house processing capacity. A new furnace costs about £13 million to build.

- A.26 The UK has the capacity to recycle 900,000 tonnes of glass, which should be sufficient to meet its obligation under the Packaging Waste Regulations. One constraint on recycling increased quantities of glass is that while the UK imports large quantities of green glass (wine bottles, for example), it does not produce similar volumes of green containers: it is estimated that the UK may reach the limit for its use unless new alternative uses for green glass can be identified. Cullet also needs to be ground to a particular size and the grinding cost alone is often equivalent to the cost of some raw materials. Alternative potential uses of cullet are in construction materials such as bricks, cement, ceramic tiles, road-making materials, and decorative products, all typically low-value products which can otherwise be made from low-priced materials such as aggregates.

## **Summary**

- A.27 The glass industry estimates that there is sufficient recycling capacity to fulfill the UK's recycling obligation but that significant increases in the collection of recycled material will be necessary. This is likely to involve increased collection from commercial sources as well as an increase in the density of bottle banks and consumer awareness.

## **ALUMINIUM**

- A.28 The UK currently uses about 116,000 tonnes of aluminium packaging a year consisting of cans (67%), foil (20%), closures (7%) and aerosols (6%). The food and drink industries are the biggest users of cans and aerosol containers, but other users include toiletries, home care products, promotional and industrial users.

## **Recovery**

- A.29 About 26,000 tonnes of aluminium packaging are recovered a year, of which around 95% is recycled and 5% is recovered through waste to energy (all aluminium foil).

## **Collection**

- A.30 Efforts to collect post-use aluminum packaging have been concentrated on beverage cans and foil which are recovered from household waste.

### ***Beverage cans***

- A.31 The infrastructure for collecting aluminium cans is well established. In 1996, about 78,000 tonnes of aluminium cans were used, of which 23,900 tonnes (31%) were recycled. Beverage cans are mainly collected through 'bring' systems and through a number of kerbside refuse collection schemes. There are about 5,000 aluminium can banks in the UK, of which 4,000 are owned by local authorities and 1,000 are on retail sites. These are typically part of either Aluminium Can Recycling Association's (ACCA) network, or Alcan's own programme, both of which offer cash for the cans. Alcan also conducts a public awareness programme consisting of advertising and promotions. ACCA provides items such as signs, posters and collection sacks, and about 90 centres are provided with baling and flattening kit; ACCA also puts resources into increasing public awareness about can recycling. Alcan's own collection network consists of 26 fixed centres, eleven of which have free loaned equipment, and 270 mobile centres. At present many of the collection centres do not collect sufficient volumes of cans to be profitable and it is estimated that the present collection infrastructure could accommodate twice as many cans.
- A.32 The cans are taken from the collection centres to one of Alcan's eight regional processing centres where contaminants are removed, before they are delivered to its dedicated plant in Warrington. Once the cans have been collected, flattened and baled they are a worldwide commodity.

### ***Foil***

- A.33 The UK consumes about 23,000 tonnes of single material aluminium foil. The bulk of this (41%) is in the form of foil containers and household foil (35%). At present there are no facilities for recycling contaminated foil and so only clean foil is collected for recycling. The Aluminium Federation estimates that about 350 tonnes of foil are recycled a year.
- A.34 Most of the foil which is recycled consists of containers (about 53%), household foil (22%) and milk bottle tops (15%). This foil is primarily collected through voluntary 'bring' schemes set up by charities and schools in conjunction with the Aluminium Foil Container Manufacturers' Association (AFCMA); there are about 60 schemes in operation in the UK. It has not proved viable to collect foil on a commercial basis because of the wide geographical spread of the low-weight material.
- A.35 Foil is also collected by kerbside schemes where it is sorted by hand at Material Reclamation Facilities. The lack of mechanical separation limits the amount which is recovered through this method but the AFCMA is currently co-sponsoring the first working project to separate foil from aluminium cans, using eddy current technology.

### **Reprocessing**

- A.36 Producing primary aluminium involves very high costs but the recycling costs of secondary aluminium are low and the waste can be melted and reused indefinitely without loss of quality. The DETR defines aluminium reprocessors as firms which manufacture sheets, coils or ingots. The process involves removing loose materials such as sand, grit, glass and ferrous metals from the collected materials as well as paint and lacquer. Some contaminants are firmly bonded and cannot be removed, but the scrap can still be used at special furnaces. The existence of contaminants means that the waste has to be blended or diluted with primary metal to meet the particular specifications of the end product, before they are placed in a furnace and smelted, cooled into ingots, and cut to size as necessary.
- A.37 Aluminium cans are recycled by Alcan at a dedicated plant at Latchford near Warrington. The plant cost £28 million (compared to the cost of £300 million for a primary smelter) and has a capacity of about 60,000 tonnes a year. At present it recycles cans imported from Europe and the United States because of insufficient cans collected in the UK. Alcan expects to increase the capacity of this plant to about 80,000 tonnes in the next couple of years.
- A.38 Aluminium foil is mainly recycled by Calder but there are a limited number of other firms in the secondary industry which also recycle small amounts of foil. Most recycled foil is used for cast components in cylinder heads in the automotive industry.

## **Summary**

- A.39 Sufficient collection infrastructure and reprocessing capacity for aluminium packaging is already in place: the key challenge will be to encourage consumers to increase the volume of packaging collected for recovery and recycling.

## **STEEL**

- A.40 About 600,000 tonnes of steel packaging are used each year in the UK: it is either uncoated (for example steel drums) or plated with tin or other lacquers to produce, for example, a sterile rust resistant product. The main industries which use steel packaging are the food, drink, tobacco, chemical and petrochemical industries.

## **Recovery**

- A.41 Steel packaging has the advantage that it is easily sorted and can be recycled at relatively low cost. About 80,000 tonnes (13%) of steel packaging were collected for recycling in 1996 (not including drums or strapping).

## **Collection**

- A.42 Household waste is currently the main source of used steel packaging for recycling, most of which is collected by local authorities using magnetic separation to extract the steel from incineration residue at waste to energy plants. Cleveland Waste Management plans to open a new waste to energy plant during 1997 which will serve local authorities in Teesside, Stockton, Middlesbrough and Hartlepool, with a capacity to extract 4,000 tonnes of steel each year. Some existing waste transfer stations have magnetic extraction equipment to remove steel from raw waste.
- A.43 Local authorities and private companies also operate voluntary 'bring' systems such as can banks: British Steel operates the 'Save-a-Can' scheme which has 2,000 sites nationwide and which collected about 6,000 tonnes of steel and aluminium cans in 1996. These sites are generally focused on areas where local authorities do not extract steel through magnetic extraction, or where there are few or no kerbside collection schemes.
- A.44 The commercial sector - public houses, clubs, restaurants and garages, in particular - generate a significant amount of steel packaging but at present the majority is not collected for recycling.

## **Reprocessing**

- A.45 The DETR defines steel reprocessors as firms manufacturing sheets, coils or ingots and de-tinners. About 80,000 tonnes of steel cans were recycled in the UK in 1995, although it is estimated that there is existing capacity to recycle up to 240,000 tonnes a year. Some steel cans are exported for recycling but the majority are recycled in the UK.
- A.46 Steel can be recycled either by using a basic oxygen furnace, which can typically use 75% hot metal and 25% scrap (although higher levels of scrap can be used if the quality is good, or if gas, coal or oil is injected to increase the energy used); or by using electric arc scrap re-melting furnaces, where theoretically higher levels of scrap can be used. There firms which recycle cans using such methods are dominated by British Steel which has the capacity to recycle 100,000 tonnes a year of incinerated cans and as many de-tinned cans as arise. The steel can be recycled into coil and ingots for manufacture into other products.

Tin-plating can be removed from steel cans using hydrometallurgical processing (leaching and electrowinning)<sup>1</sup> which upgrades the steel. There are two de-tinning plants in the country, one at Hartlepool and the other at Llanelli, both owned by AMG Resources. These two plants together have the capacity to process about 35,000

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1 This process cannot remove tin from metal which has passed through an incinerator because tin diffuses into steel during incineration.

tonnes of magnetically separated material a year to produce about 30,000 tonnes a year of good quality steel (as well as 120 tonnes of tin).

- A.47 It is likely that additional capacity will be needed to meet the UK's obligations under the Regulations. This would involve large scale capital investment but the process is considered cost effective and de-tinning is expected to expand as the volume of magnetically separated material increases.

## **PLASTIC**

- A.48 The UK currently uses about 1.8 million tonnes of plastic packaging each year, primarily flexible plastic film (carrier bags or pallet stretch) and rigid containers such as bottles and intermediate bulk containers (plastic boxes, crates and pails). There are a number of different polymer types of plastic, each having different properties and therefore different uses: polyethylene terephthalate (PET) is used for fizzy drinks bottles, high density polyethylene is used for bleach and other opaque bottles and polyvinyl chloride (PVC) is used for still mineral water bottles.

- A.49 The main users are the food, drink and dairy industries which together account for over 70% of total demand.<sup>1</sup> The remaining 30% is used by the confectionary, household goods, personal care, toiletries, medical, pharmaceutical, agricultural and industrial sectors.

## **Recovery**

- A.50 In 1996 the UK recovered about 80,000 tonnes (about 4.5%) of plastic packaging waste. Recovery of plastics packaging is essentially recycling but also includes a limited amount of energy from waste.

## **Collection of plastic packaging**

- A.51 Post-use plastic packaging is generated by both households and commercial outlets. Household waste typically consists of dirty mixed plastics while commercial waste is usually clean single polymer plastic.

## ***Household***

- A.52 Only rigid containers are recovered from household waste because plastic film is usually contaminated with food or other products and has little value for recycling.

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2 *Market Report on Packaging (Plastics)*, Key Note, 1996.

Recycling of Used Plastic Containers Ltd (Recoup) has been actively promoting the collection of plastic bottles, primarily by advising local authorities on the setting up of collection schemes and bottle sorting plants. A total of 168 local authorities collected plastic bottles either through 'bring' systems or through kerbside collections in 1996. There were 2,912 plastic banks on 2,081 sites and about 1.4 million households were covered by a kerbside collection scheme.<sup>1</sup> Overall these collected about 5,500 tonnes of plastic.

- A.53 Plastic containers need to be separated into the individual polymer type before they are recycled, and the majority of local authorities sort the bottles manually and then compact and bale them for transport to a reprocessing plant. Two local authorities also have automatic sorting equipment. There are six sites which recycle plastic bottles: St Helens, Castleford, Macclesfield, Fleetwood, Chichester and Milton Keynes. In the past some bottles have been exported to Holland for recycling. For the largest reprocessors, transport costs add little to total costs and the geographic market is likely to be at least national.

### ***Commercial***

- A.54 The main type of plastic packaging waste generated by the commercial sector is plastic film wrap, used for transit packaging. The demand for film wrap has been increasing in recent years and this trend is likely to continue because it is lightweight and relatively easy to recycle. At present, this is typically collected by waste management companies. Plastic crates - usually single polymer and therefore relatively easy to recycle - are another major source of material for recycling.
- A.55 Save-a-Cup Recycling Ltd operates a scheme for collecting polystyrene vending cups. It targets commercial and institutional sources such as schools and hospitals to whom it sells or leases shredding machines which improve the density of collected materials. There were nearly 2,000 such machines in use in 1996 in selected parts of the country and a total of 832 tonnes were collected in the financial year ending March 1997. The scheme expanded to operate nationally in April 1997 and Save-a-Cup estimates that by 2001 it will be collecting about 1,680 tonnes of cups for recycling. At present these cups are reprocessed by Tylers of Swindon and Linpac Recycling on a tolling basis.

### **Reprocessing**

- A.56 The DETR defines a plastics reprocessor as a granulator or reprocessor making new plastics. The UK plastics reprocessing market is fragmented, consisting of about 120

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1 *Source:* Recoup.

firms. These use a mechanical recycling process but the UK also has a pilot feedstock recycling plant.

### ***Mechanical reprocessing***

- A.57 The plastic is broken up and hand sorted to remove any obvious contaminants and then passed through a granulator to chopped it into flakes. It is then passed through an intensive washing machine to remove other contaminants (such as residue and labels) to produce clean polymer flakes which are then granulated and converted into pellets which can then be used to manufacture new products using re-extrusion. Different ingredients will be selected to meet a particular customer's specifications on colour, tensile strength, and mouldability, and some virgin material will invariably be included. Sorting and separating the different plastic materials improves the quality of the recyclate and there are a number of different types of automatic equipment which can be used, including hydro-cyclones to separate plastics of different densities<sup>1</sup> and x-ray-based technologies to separate PVC from PET. Such equipment costs in the region of £1 million, though, and has a minimum efficient size of about 10,000 tonnes a year. For this reason, only two reprocessors (Linpac and Reprise) have such equipment in the UK, and the majority focus on recycling industrial film and crates.
- A.58 The same process is used to recycle mixed plastics or single polymer plastic. Mixed plastics can be recycled to produce low-value products such as wood substitute for fencing, garden furniture and building boards. At present there are about nine reprocessors which recycle mixed plastics and which together account for less than 10% of the total of recycled plastic.
- A.59 The number of possible end products for recycled plastics is constrained by two factors. First, colour contamination means that the end product has to be a dark colour (the plastic flakes are typically mixed colours and adding colour is very costly). Secondly, the food and drink industries accounts for the majority of virgin plastic packaging use, but they cannot use recycled plastic containers because of possible bacterial contamination.
- A.60 Plastics recyclate is used to make products such as black refuse sacks, benches, drainage pipes, coat hangers, flower pots, fibre filling, strapping, engineering plastics, carpet backing and floor tiles, garden and street furniture, window and door frames, fence posts, synthetic wood products, wheelie bins, and composting bins. Dolphin Packaging is reported to be trialing the blending of recycled PVC bottles with virgin plastic to produce extruded clear sheet.

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1 High-density polyethylene will float in water while other polymers will sink at different rates: the hydro-cyclone can thus be tuned to siphon off different types of polymer.

### ***Feedstock recycling***

- A.61 Feedstock recycling plants can take dirty, mixed polymers. The process involves returning the plastic to its original components to create 'virgin' polymers. It is estimated that such a plant has a minimum efficient scale of about 150,000 tonnes a year (about 6% of current UK waste). BP operates a pilot plant at Grangemouth which has a capacity of about 25,000 tonnes and feedstock recycling is generally seen as a process for recycling in the future.

### **Summary**

- A.62 A significant increase in the quantity of plastics packaging which is recycled will be necessary to meet the UK's targets under the Producer Responsibility Obligations. While the recycling of packaging film and crates is comparatively easy, the recycling of domestic waste requires higher capital investments to separate out polymers and produce high quality recyclate.

## **B EXTRACT FROM THE EXECUTIVE SUMMARY OF VALPAK'S BUSINESS PLAN**

### **Introduction**

- B.1 Valpak intends to be a major organisation offering a compliance service, as described in the Regulations, to members across all materials. It is incorporated as a not-for-profit company, limited by guarantee. Valpak will be competitive with other compliance schemes and provide a cost effective service for those otherwise considering individual compliance.
- B.2 Valpak will assume the legal obligation to recover the total aggregated obligation tonnage of each material for all its members. Valpak has assumed that up to 5000 companies are likely to have an immediate obligation. It is targeting to attract up to 1500 members by the beginning of 1998. Valpak may find it necessary to manage its membership to a level which lies within the recovery contracts which can be negotiated at reasonable cost.

### **Objectives of Valpak**

- B.3 Valpak's overall objective is to channel its members' funds in the most effective way to meet the legally specified packaging recovery and recycling obligations of its members and thus contribute to an increase in UK packaging recovery rates. Valpak aims to establish the lowest cost method of meeting members' obligations and will share the costs of recovery equitably.
- B.4 Valpak will also act as a source of information and expertise for its members and as a channel of communication and best practice for the industry.

### **Operating method**

- B.5 Valpak's operating proposals have been the subject of extensive consultation with key interested parties. Valpak's main activities will be negotiating and entering into contracts with accredited reprocessors and other waste holders to fund the recycling or recovery of packaging waste in exchange for documentary evidence of compliance as defined by Statutory Guidance. It will operate internal procedures to allocate the costs recovery equitably among its members.
- B.6 Valpak does not expect to undertake any material collection or reprocessing itself, preferring to utilise existing expertise, organisations and facilities. However, circumstances may arise where it is necessary to make direct investments in the

recovery industry to ensure that members' obligations are discharged at lowest possible cost. This is most likely to be on the basis of joint venture projects which produce a commercial return.

- B.7 The revenue from Valpak's contracts is expected to be used by local authorities, waste management companies, reprocessors and joint venture projects to justify additional capital expenditure for collection, sorting and reprocessing capacity. Valpak will favour organisations which can demonstrate a capability consistently and effectively to raise recovery levels at least cost, including support for existing single stream schemes where appropriate.
- B.8 Valpak will encourage members to maximise recovery of their own post use packaging waste which is discarded on their premises. It will therefore be prepared to acquire the associated evidence of compliance from these members on commercial terms which are compliance cost neutral for them. It will also encourage its members to specify the use of recycled materials in their packaging.
- B.9 In addition, Valpak will participate in selective education and promotion activities which encourage consumers and businesses to segregate packaging waste and make it available for recycling - thus helping to minimise recovery costs.

### **Membership costs**

- B.10 Valpak intends to obtain income from its members through a one time joining fee paid by each member on a scale related to turnover and date of joining. From 1998 members will pay annual material levies.
- B.11 In addition Valpak has offered the opportunity to its pre-incorporation members to become Founder Members in exchange for a higher joining fee. These Founder Members will be entitled to be represented on an Advisory Council whose function will be to support and assist the Valpak Executive with information and advice, drawing on their experience and expertise for the benefit of all Members. This Council will be a 'think tank' and a conduit for industry best practice. It will not exercise any executive control, and its role will be reviewed when the regulations are fully implemented in 2001.
- B.12 The annual material levies will be payable from 1 January 1998, quarterly during the membership year, and vary with tonnage and composition of obligation. The levy will consist of material recovery costs allocated to members and a contribution to Valpak's

overhead costs. It is not yet possible to give an accurate projection of recovery costs, but some preliminary work has resulted in the following estimates.

**Estimated levy cost**

<i>Material</i>	<i>Range £/tonne</i>
Aluminium	6 - 20
Steel	25 - 90
Glass	2 - 50
Paper	2 - 30
Plastics	60 -160

- B.13 Valpak is currently conducting discussions with major reprocessors to obtain more accurate estimates of recovery cost and capacity projections. These estimates exclude any allocation of Valpak's overhead cost which is expected to be between 3% and 5% of Valpak's turnover.

## **C      OFT NOTICE SEEKING COMMENTS FROM THIRD PARTIES**

The following notice was placed in issues of the *Financial Times* and *Packaging Week* dated 10 April 1997:

### **OFFICE OF FAIR TRADING**

Valpak Limited - notification of an agreement

#### **The Producer Responsibility Obligations (Packaging Waste) Regulations 1997 ('the Regulations')**

Under these Regulations, certain businesses have obligations regarding the recovery and recycling of packaging. They can either act alone to meet the requirements of the Regulations, or join a registered compliance scheme which will assume this responsibility for its members.

The Director General of Fair Trading has a duty to undertake a competition scrutiny of all compliance schemes prior to their registration.

The Director General has received a submission concerning the operation of a company to be known as Valpak Limited. This company intends to operate a compliance scheme covering all materials to which the Regulations apply. These materials are glass, metal, paper and fibreboard, and plastic.

The Director General invites comments from interested third parties in relation to the scheme to be operated by Valpak Limited. They should be addressed to:

David Blocksidge  
Office of Fair Trading  
Competition Policy Division  
Field House  
15-25 Bream's Buildings  
London EC4A 1PR

To be considered as part of this consultation, comments must be received by 30 April 1997.