2 Conclusions

Contents

Page

The reference

2.1. On 13 February 2002, under the merger provisions of the Fair Trading Act 1973 (the Act), the Secretary of State for Trade and Industry referred to the CC for investigation and report the proposed acquisition of MBM, currently part of the Etex Group SA (Etex), by H+H Celcon which is a wholly-owned subsidiary of H+H International.

2.2. The terms of reference are set out at Appendix 1.1. We were required to report by 27 May 2002. The terms of reference refer specifically to the supply of aircrete concrete blocks. Aircrete is described further in Chapter 3.

The companies

2.3. The companies involved in the merger and their financial performance are considered in the following paragraphs.

H+H Celcon

2.4. H+H Celcon is the UK subsidiary of H+H International, which is a Danish company. Celcon Ltd (Celcon) was established in 1949 by another Danish company, Christiani & Neilsen, and originally produced lightweight concrete products. H+H International acquired a shareholding in Celcon in 1958 and helped it to start aircrete production. In 1998 it acquired sole control of Celcon, which adopted H+H in its name and branding. It also decided to specialize primarily in the manufacture and supply of aircrete products in northern Europe and began a planned disposal of its other interests. H+H International has around 1,050 employees, and its headquarters are in Ølsted in Denmark. Roughly 50 per cent of group turnover of DKR1.2 billion (£102 million) in 2001 was accounted for by H+H Celcon. H+H International has two classes of shares. Its B shares, which account for the majority of the share capital but a minority of the voting rights, are listed on the Copenhagen stock exchange and those B shares had a market capitalization of around DKR584 million (£49 million) on 30 April 2002.

2.5. H+H Celcon has three factories in Britain producing aircrete blocks: at Westbury in Wiltshire; at Pollington, near Goole in East Yorkshire; and at Borough Green, near Sevenoaks, Kent. The company is completing a second factory at Pollington capable of manufacturing reinforced autoclaved aerated concrete[1] as well as aircrete blocks, for use in its 'Jämerä' system, which involves prefabricated construction elements for walls, floors and roofs (see paragraph 3.75). H+H Celcon employs around 385 people.

2.6. In the year ended 31 December 2001 H+H Celcon made a trading profit of £9.7 million on turnover of £55.7 million. Turnover and trading profit have fallen slightly in the last two years from a peak of £58.5 million and £12.1 million respectively in 1999 (see Table 4.2). The company attributed the drop in profits to factors including the effect of bad weather on new housing starts, disruptions from the outbreak of foot and mouth disease, and the impact of the terrorist attacks of 11 September 2001 in the USA. Return on sales in 2001 was 17.4 per cent and return on average capital employed (on a historic cost basis) of £20.4 million was 47.5 per cent (see paragraph 4.26).

[1]The uses of reinforced autoclaved aerated concrete are set out in paragraph 3.36.

MBM

2.7. Etex is a privately-owned diversified international building products company based in Belgium. Etex is itself controlled by another private Belgian company, Fineter SA (Fineter). MBM is one of Etex's UK subsidiaries and is engaged in the manufacture and supply of aircrete products in Great Britain, which are sold under the Thermalite trading name.

2.8. Thermalite was founded in 1951 by the John Laing Group (Laing) to produce aircrete blocks using technology imported from Sweden. In 1983 it was subject to a management buy-in, and in 1986 the business was bought by Marley plc (Marley), which supplied a number of products to the construction industry. In 1992, several similar Marley businesses, including Thermalite, were brought together in one company to form MBM, supplying concrete and clay roofing tiles, bricks and paving, as well as aircrete products. Marley was itself acquired by Etex in February 1999. All MBM's businesses, with the exception of Thermalite, have since been divested or transferred elsewhere within the Etex group, so that MBM's only activity now is the manufacture and supply of aircrete.

2.9. MBM has three factories in Britain: at Newbury, Berkshire; at Purfleet in Essex; and at Hams Hall, Sutton Coldfield, West Midlands. Its head office, which is not included in the proposed sale, is located at Coleshill, Birmingham. The company has approximately 366 employees. Turnover was £[✂] million in the year ended 31 December 2001, having risen from £[✂] million in 2000 and £[✂] million the year before. Operating profit was £[✂] million in 2001. Return on sales in 2001 was [✂] per cent. Capital employed (on a historic basis) was £23.0 million at December 2001 and the return on capital employed in that year was [✂] per cent (see paragraph 4.37).

The proposed acquisition

2.10. On 21 December 2001, H+H International announced that H+H Celcon had entered into an agreement for the proposed acquisition of MBM comprising the aircrete business trading under the Thermalite brand. A sale and purchase agreement was signed the same day under which H+H Celcon agreed to purchase the whole of the share capital of MBM. The purchase price for the acquisition was agreed at £81 million based on a debt-free balance sheet and net assets of £24.5 million.

2.11. Completion of the sale and purchase agreement is conditional on clearance under the Act, and on completion of financing arrangements by H+H International, as well as normal conditions relating to no material adverse events occurring.

Jurisdiction

2.12. The terms of reference require us to investigate and report on the following questions:

(a) whether arrangements are in progress or in contemplation which, if carried into effect, will result in the creation of a merger situation qualifying for investigation in that enterprises carried on by or under the control of H+H International will cease to be distinct from enterprises carried on by or under the control of Etex (one at least of which, as regards each company, is carried on in the UK);

(b) if events so require, whether the actual results of those arrangements are the creation of such a situation; and

(c) if so, in either case, whether the creation of that situation may be expected to operate or (if events so require) operates against the public interest.

2.13. In relation to *(a)* and *(b)*, for jurisdiction purposes, we have to consider whether the share of supply test or the assets test under section 64(1) of the Act is satisfied. In general terms, the share of supply test is satisfied where at least one-quarter of the goods or services of any description supplied in the UK or in a substantial part of it are either *(a)* supplied by or to one and the same person; or *(b)* supplied by or to the persons carrying on the relevant enterprises. The assets test is satisfied if the gross value of the assets taken over exceeds £70 million. If the CC finds that either the assets test or the share of supply test is satisfied, it is required by the terms of reference to exclude the other from its consideration.

2.14. Looking at the requirements in paragraph 2.12*(a)* and *(b)*, it is clear from the events and circumstances set out in paragraphs 2.10 and 2.11 that an agreement exists for the acquisition of MBM by H+H Celcon, subject to the conditions mentioned, and that at least one of the enterprises of both H+H International and Etex are carried out in the UK (namely H+H Celcon and MBM). Figure 5.1 shows that the combined share of H+H Celcon and MBM of the supply of aircrete in Great Britain following the merger would be 67 per cent, measured in volume of sales terms. We therefore conclude that:

(a) arrangements are in progress which, if carried into effect, will mean that enterprises carried on by or under the control of H+H International will cease to be distinct from enterprises carried on by or under the control of Etex; and

(b) the share of supply test is satisfied.

2.15. As we have found the share of supply test to be satisfied, we have excluded the assets test from consideration. We further conclude that arrangements are in progress or in contemplation which, if carried into effect, will result in the creation of a merger situation qualifying for investigation. We are, therefore, required to consider whether the creation of this merger situation operates or may be expected to operate against the public interest.

The aircrete industry

Construction methods

2.16. Aircrete production is part of the concrete block industry whose output is used in new residential accommodation (53 per cent), repairs, maintenance and improvements (RMI) (13 per cent), non-residential construction (21 per cent) and in other categories (13 per cent) (see paragraph 3.17). There are two main methods of construction in the residential sector: traditional masonry and prefabricated—the latter chiefly timber frame, but also including steel frame and other techniques such as H+H Celcon's planned Jämerä system. Whichever method of construction is employed, a brick outer facing is typically, though not universally, the exterior finish; and bricks per se, therefore, are not part of our analysis of the relevant product market. Prefabricated construction, which is considered in paragraph 2.69, is based on pre-built frames or panels manufactured in factories and then assembled at the construction site.

Masonry construction

2.17. Masonry construction, however, is the traditional construction technique for housing in the UK. It accounts for the vast majority of residential construction activity in the UK. This compares with timber frame, the next largest category, which achieved 10 per cent overall in Great Britain in 2001, though in Scotland its share (at 46 per cent) has traditionally been higher (see paragraph 3.6 for details).

2.18. Three main types of concrete block are used in masonry construction:

(a) *Dense aggregate blocks.* Made from crushed rock/gravel, sand and cement. They are the heaviest blocks and have the best load-bearing capacity, though they are the least efficient heat insulators but the best at sound insulation.

(b) *Lightweight aggregate blocks.* Of lower density and made primarily from synthetic aggregates and cement. They are lighter with a lower load-bearing capacity but are better insulators than dense aggregate blocks.

(c) *Aircrete blocks.* Made through chemical reaction of water, pulverized fuel ash (PFA) or quartz sand, cement, lime, anhydrite and aluminium powder. They have the lowest load-bearing capacity but can nonetheless be used for the construction of houses up to two to three storeys high. They are also the lightest of the three block types, the best thermal insulators and the easiest to work with.

Concrete block manufacturers and plant locations

2.19. Statistics produced by the Department of Transport Local Government and the Regions (DTLR) show that sales of concrete blocks in 2001 amounted to 88.5 million m^2, which equates approximately to 9 million m^3. Of this total, some 3.7 million m^3 (41 per cent) were dense aggregate blocks, 2.3 million m^3 (26 per cent) were lightweight aggregate blocks and 2.9 million m^3 (33 per cent) were aircrete blocks.[1]

2.20. Based on figures for 2000, but allowing for the acquisition by Tarmac Limited (Tarmac) of the Durox Building Products Limited (Durox) aircrete manufacturing subsidiary of RMC Group plc (RMC) following regulatory clearance in late 2001, the leading block supplier is Tarmac, with an estimated 22 per cent share of all aircrete and aggregate blocks (20.4 million m^2). Tarmac is followed by the main parties to the merger—MBM with 11 per cent (10 million m^2) and H+H Celcon with 10 per cent (9.2 million m^2). Tarmac manufactures both aircrete (9.7 million m^2) and aggregate blocks (10.7 million m^2), the sole supplier in Great Britain to do so, while MBM and H+H Celcon only manufacture aircrete.

2.21. Tarmac, MBM and H+H Celcon are currently the only firms making aircrete in Great Britain. A fourth aircrete manufacturer, Durox, was acquired by Tarmac following regulatory clearance in December 2001. As Table 3.2 shows, each of the three current British aircrete manufacturers has roughly one-third of total aircrete supply. Quinn Group Ltd (Quinn), based in Northern Ireland, also manufactures aircrete. It supplies between 35,000m^3 and 40,000m^3 in Britain annually, and a much smaller amount locally in Northern Ireland.

2.22. After Tarmac and the main parties, the next biggest concrete block maker is Hanson Concrete Products Limited (Hanson) which had a 9 per cent share in 2000, followed by five others who had shares of 3 per cent or more of the total supply—Aggregate Industries plc (Aggregate Industries), Plasmor Limited (Plasmor), RMC, Forticrete Limited (Forticrete) and Thomas Armstrong (Holdings) Limited (Thomas Armstrong). Besides these there are said to be some 40 or so further aggregate block manufacturers in the industry.

2.23. The three aircrete manufacturers in Great Britain each have three manufacturing plants located mainly in the south of the country and the Midlands. Aggregate block manufacturers' plants, however, are much more numerous and are distributed rather more evenly in relation to centres of population (see Figure 3.3). The reason why aircrete manufacture differs from aggregate block production in numbers of plants and their location in part reflects the relatively light weight of aircrete compared with aggregate blocks and its impact on the cost of transport. H+H Celcon has told us that its transport costs for aircrete are some [✂] per cent of sales prices

[1] In this report m^3 and m^2 are used according to context. Based on blocks 100mm thick, a broad rate of conversion is that $1m^3$ equates to $10m^2$. Block thicknesses vary, however.

after rebates, and all three aircrete manufacturers have said that aircrete is delivered nationwide in Great Britain. The transport element of aggregate block prices, however, is much higher, and Thomas Armstrong and others have told us that the realistic maximum radius for delivery of aggregate blocks is generally within 40 to 50 miles of the plant concerned.

Production processes for aircrete and aggregate blocks

2.24. The production processes for aircrete and aggregate blocks are very different. In the case of aircrete, the aluminium powder, when added to the mixture made from the other ingredients listed in paragraph 2.18*(c)*, causes a chemical reaction generating minute hydrogen bubbles that form the characteristic aircrete structure. (The hydrogen does not remain in the blocks and presents no health risks.) After setting and cutting to the required shapes and sizes, the blocks are 'cured' at high temperatures in ovens known as autoclaves[1] and may be used as soon as they have cooled.

2.25. The process for aggregate blocks, on the other hand, involves mixing the ingredients into moulds and then leaving the blocks to set, a process which is also known as curing. However, no chemical reaction or heating is involved. The aggregate mix will determine the density of the block produced.

Aircrete and aggregate block characteristics, including functional substitutability

2.26. Aircrete is mainly used in residential construction and in the inner leaves of external cavity walls. New domestic dwellings accounted for 61 per cent of all aircrete output in 2000. At least a further 11 per cent went into domestic repairs, maintenance and improvements (see Table 3.4). 39 per cent of all aircrete production is used for the inner leaves of new domestic dwellings. Consequently, the chief focus of this inquiry has been on domestic construction and, within that, on inner leaves. The closest physical equivalent products for aircrete are lightweight aggregate concrete blocks followed by dense aggregate concrete blocks. Looking just at inner leaf construction in residential accommodation in Great Britain, concrete blocks accounted for 17.2 million m^2 in 2000. Of this total, 66 per cent was aircrete, 27 per cent was lightweight aggregate blocks, and 7 per cent dense aggregate blocks.

2.27. Table 3.3 shows the comparative characteristics of aircrete and aggregate blocks. A typical 440mm × 215mm × 100mm aircrete block will have good thermal insulation properties and weigh between 5.5kg and 7.5kg. Its sound reduction capacity will be relatively low, however, as will its load-bearing capacity. By contrast, similarly sized lightweight and dense aggregate blocks will have progressively lower thermal insulation properties and will weigh considerably more—between 13.1kg (lightweight) and 18.5kg (dense). Their ability to provide sound insulation is significantly better than aircrete and their load-bearing capacity is also considerably greater, particularly so in the case of dense aggregate blocks.

2.28. A number of respondents, including both main parties, have told us that it is physically and technically possible to use aggregate blocks in every application to which aircrete is currently put, although aircrete cannot be used instead of aggregate blocks for the higher load-bearing functions of the latter. Our consultant advisers, E C Harris, support this claim (see paragraph 3.97), concluding that for each application of aircrete blocks a solution can be identified using aggregate blocks and, further, that timber and steel frame systems can be functionally equivalent to systems made of aircrete or aggregate blocks. Lightweight aggregate blocks are considered to be a more appropriate substitute for aircrete than dense blocks, though there is no hard and fast rule.

---

[1]The process is described more fully in paragraph 3.56 onwards.

2.29. Prior to April 2002, requirements for thermal insulation were such that additional insulating material was not necessarily required for inner leaves constructed from aircrete, though for aggregate block walls it was. Since April 2002, the thermal insulation requirements have been tightened, in Part L of the Building (Amendment) Regulations 2001[1] (Building Regulations), and most industry participants agree that both materials now require added insulation especially under the 'elemental' method of complying with the Building Regulations.[2] Aggregate blocks require more added insulation than aircrete, however, to meet the new thermal insulation requirements. Some respondents told us that use of aggregate blocks for walls instead of aircrete could imply the need to have thicker walls in instances where cavities are retained. This is because the additional thermal insulation required would otherwise fill the cavity. Other housebuilders did not, however, regard this as an issue.

2.30. Aircrete is generally more expensive than aggregate. Ranges between £4.90 per m^2 (aggregate) and £7.50 per m^2 (aircrete) have been quoted to us. However, the main parties have told us that the cost of building a wall is much the same—around £70 per m^2—whether aircrete blocks or aggregate blocks are used. Analysis provided by E C Harris agrees with this (see the discussion in paragraphs 3.98 to 3.104). Although there can be many differences in the precise prices of labour and materials, it appears that there are sets of combinations of these which result in overall costs which match. The analysis by E C Harris presents the cost of a typical lightweight aggregate block as £0.48 and that of an equivalent aircrete block as £0.65, or 35 per cent more expensive. (Each m^2 of wall requires ten blocks.) However, the analysis also shows that if the installed cost of the two in a m^2 of wall is calculated (that is, once labour, in particular, is taken into account), the difference narrows—£17.80 per m^2 for aggregate as opposed to £18.50 for aircrete, a gap of 70p, or only 4 per cent. When the extra cost of the insulation is added (in an example of a partial fill cavity solution, for lightweight blocks this is £8.25 per m^2 compared with £6.50 for aircrete), the difference in total cost between the two methods is very slight—together with facing bricks and finishes it amounts to £72.00 per m^2 for aircrete, in the partial fill example in Table 3.12 and £73.05 for lightweight aggregate. The main parties acknowledge that the cost of the block outer leaf and internal plastering remained constant regardless of whether aircrete or aggregate blocks are used, and, therefore, provided us with 'stripped-down' costs—that is, those costs which will change depending on the choice of aircrete or aggregate. The main parties said that these comprised the block cost itself, the insulation cost, the block waste allowance, the mortar cost, the labour cost and a profit allowance of 10 per cent. These costs showed a similarly narrow difference between the two types of blocks—between £19.30 and £21.00 per m^2 of wall.

2.31. The main reason for these very small differences is that the cost of the blocks, whether aircrete or aggregate, is a very minor element in the total.

Customers

2.32. The two main customer groups for concrete blocks for use in residential construction are housebuilders and builders' merchants. Major housebuilders negotiate an annual arrangement direct with aircrete or aggregate block manufactures for delivery of blocks direct to construction sites using builders' merchants or factors (specialist block and brick distributors) for invoicing and other services and logistics. Approximately 75 per cent of aircrete production is delivered direct to these and other housebuilders' construction sites. This arrangement will normally include an annual volume-related rebate. We have been told that for the larger housebuilders the deal normally specifies a maximum price the housebuilder is willing to pay for the year, and a volume that will be made available by the manufacturer. According to the main parties, however, the housebuilder is not formally committed to purchase the full amount specified in the deal or, indeed, anything at all over the year.

---

[1]SI 2001/3335.
[2]See paragraph 3.86 for an explanation of the three methods available to housebuilders.

2.33. Builders' merchants, as well as acting as intermediaries for deliveries to the major housebuilders, themselves purchase most of the remaining 25 per cent of aircrete manufacturers' output. They then supply the aircrete blocks, together with a wide range of building materials, direct to the construction trade (small and medium professional builders) and to DIY and other personal customers. Stock is held in their yards. The three largest UK builders' merchants are Travis Perkins Trading Company Ltd (Travis Perkins), Jewson Limited (Jewson) and Builder Center. A number of smaller merchants and intermediaries have joined together to form buyer groups, such as the National Merchant Buying Group and the Combined Buying Association. Prices tend to vary significantly according to the rebates offered and the delivery channel.

Reasons for the proposed acquisition

2.34. In effect, the proposed merger forms part of a series of transactions by both parent companies, Etex and H+H International, which were aimed at refocusing their respective businesses on particular activities. Etex had acquired MBM along with the rest of Marley in 1999, and early in 2001 it had acquired the pipe systems business of Glynwed International plc. These two major acquisitions meant that it needed to make some disposals in order to reduce the level of group debt. MBM was both profitable and, unlike most Etex companies, was not active on a pan-European scale. Hence, MBM was an obvious candidate for disposal. Accordingly, in July 2001, MBM was put up for sale.

2.35. When, following reorientation of its business strategy in 1998 to focus primarily on aircrete production, H+H International was offered the chance to buy MBM, it was attracted to the opportunity to expand its UK aircrete operations significantly.

2.36. In July 2001, an information memorandum was sent, on Etex's behalf, to [✂] parties —[✂] trade buyers (one of whom was H+H International) and [✂] financial buyers. [✂] indicative offers for MBM were received in August 2001, [✂]. The offers ranged from £[✂] million to a bid of £[✂] to £[✂] million. H+H International bid £80 million. [✂] potential buyers went through to the next round of the bidding process, and a second round of bids was submitted in October 2001. This time H+H International submitted the highest bid of £82 million, the second bid was for £[✂] million, and the third bid was for £[✂] million. Etex agreed to exclusive negotiations with H+H International, following which, on 21 December 2001, H+H International announced that it had entered into an agreement whereby H+H Celcon, its UK subsidiary, would acquire MBM for a consideration of £81 million.

2.37. H+H International told us that the acquisition of MBM and its subsequent integration with H+H Celcon would result in significant annual efficiency savings. The annual savings themselves would arise principally from staff reductions (£[✂] million), improved production efficiency and capacity utilization (£[✂] million), plus cheaper raw materials (arising from greater purchasing volume) and improved logistics (£[✂] million), giving an overall annual figure of £7.74 million. This was later revised downwards to £7.5 million, with 60 per cent to be achieved in the first year following MBM's acquisition.

Product market

2.38. Markets are generally defined by examining whether there are close substitutes on either the demand or the supply side for the relevant goods or services being examined and by applying the 'hypothetical monopolist test' (or SSNIP[1]). This asks whether someone who

[1]Small but significant non-transitory increase in price.

supplied 100 per cent of a particular product or service (or collection of products or services) could profitably raise prices by a small but significant amount and for a reasonable time, and not lose out either because customers buy something else instead, or suppliers of similar products or services shift their business to undercut the monopolist. If the hypothetical monopolist could not sustain such a price rise, then those other products or services should be included in the same market as the one under consideration. The application of this test to aircrete and other forms of concrete blocks and residential construction is discussed in detail in Chapter 5.

2.39. The SSNIP test is designed to identify the minimum set of products which are close demand or supply substitutes. Those which are close substitutes then constitute the product market for the purposes of analysis. This is, however, only one step in the process of determining the competitive pressures which the merged company would face. Subsequent analysis considers the competitive pressures which are likely to exist within the product market identified by the SSNIP test; and the constraints that may apply, either in the form of the threat of potential entry into the market, or from countervailing power exercised by buyers of the product.

2.40. We looked first at whether the different methods of residential construction most commonly employed in the UK, namely traditional masonry construction using aircrete and aggregate blocks, resulted in a single concrete blocks product market or different markets. We note that on the supply side, there is no particular difficulty for aircrete suppliers switching production so as to supply different types of aircrete blocks, from which we infer that the market is at least as wide as all aircrete blocks. Second, in the light of the considerations arising under concrete blocks, we considered timber and steel frame and other prefabricated construction techniques. We then considered the geographic scope of the market. The evidence is set out in Chapter 5.

Demand-side issues

Masonry construction

2.41. On the demand side, H+H Celcon and MBM submitted that the relevant product market in this case was at least as wide as all concrete blocks. They supported this with four main arguments. First, they said that for all uses of aircrete blocks, it was possible to identify alternative solutions using aggregate blocks which were functionally equivalent. H+H Celcon demonstrated this by describing different options for inner leaf construction which met the same structural requirements and had the same thermal characteristics.

2.42. Second, they said that, in terms of cost, builders were concerned with the overall cost of construction of a wall, rather than the separate costs of individual components; and that the overall construction cost of the outer walls of two- or three-storey residential buildings (the single biggest use of aircrete blocks) was virtually the same, for the same thermal characteristics, whether built using aircrete or aggregate bocks (see paragraph 2.30).

2.43. Third, H+H Celcon and MBM presented data which, they said, illustrated that the trends in prices of aggregate and aircrete blocks had been very similar over a 15-year period up to 2002. Given that the production methods, inputs and structure of costs of aircrete and aggregate blocks were very different, this suggested that the prices of different types of block were influencing each other, indicating that they were in the same market.

2.44. Fourth, the main parties supplied examples of customer ‘churn’, that is, switching between aggregate and aircrete blocks. They said that this indicated that individual customers did compare the prices of the different types of product and switch between them.

2.45. The main parties also argued that the competitive constraints imposed on block manufacturers by prefabricated methods of construction might be sufficiently strong to extend the relevant market definition to include all walling materials. They also supplied copies of judgements by other European competition authorities which, they said, demonstrated that in other jurisdictions, relevant product markets had been determined as much wider than individual types of concrete block.

2.46. Each of these arguments is considered further below. As a first step in assessing the relevant market, however, we conducted a survey among industry participants—housebuilders and builders' merchants, block suppliers, and trade associations. We received evidence from various organizations. The majority of block manufacturers/suppliers and the responding industry associations regarded the market as wider than aircrete; but turning to customers, the great majority of the housebuilders and builders' merchant respondents considered that the relevant market was that for the supply of aircrete alone.

TABLE 2.1 **Third party views on the relevant economic market**

Relevant economic market	*Housebuilders*	*Builders' merchants*	*Manufacturers/ suppliers*	*Associations*
Aircrete alone	8	4	5	0
Wider than aircrete	2	2	8	4
No view expressed	3		1	

Source: CC.

2.47. Respondents may have interpreted the term 'market' in different ways but the picture given by their responses was confirmed by answers to a more specific question, namely whether they would switch from aircrete to a different construction material in the event of a 5 per cent price increase in aircrete (the SSNIP test). A clear majority, 9 out of 11, of the housebuilder customers giving evidence on this issue, each of whom build more than 1,000 houses a year, indicated or implied a reluctance to consider switching out of aircrete in the event of a price rise of this level in the product. Of the remaining two, one said it would switch out of aircrete on a price rise of 5 per cent; the other did not give a clear response.

2.48. However, a number of those housebuilders also commented on the possibility of a price increase of up to 10 per cent or above. Two said that they would not switch to other construction materials; two said that they would undertake a review or give the situation serious consideration; while three said that they would switch or were likely to switch. These responses indicate that in some circumstances it might not be profitable for aircrete manufacturers to raise prices by 10 per cent. We sent a digest of third party views to each of the main parties. H+H Celcon prepared a detailed analysis of the responses in which it sought to categorize them according to its own assessment of how far they were meaningful and/or internally consistent. On that basis, H+H Celcon noted that, of 13 housebuilder customers, 11 at some point in their set of replies indicated that they would either be unconcerned about, or favour the merger; that the majority of respondents seemed to consider that aircrete and aggregate blocks competed in the same market; and that at least half of the housebuilders who had given a meaningful response had said they would at least consider switching in the event of a 5 per cent increase in the price of aircrete. H+H Celcon interpreted the digest generally as indicating that the majority of respondents supported the views which the main parties had put to us (see paragraphs 6.77 to 6.79 for further details).

2.49. We carefully considered H+H Celcon's analysis of the third party views digest. While agreeing that some of the responses were not internally consistent, and acknowledging that this has led to some difficulty in categorizing the third party responses, we were not persuaded that H+H Celcon's analysis reflected the overall weight and balance of the third party views. Our

own categorization therefore differs in some respects from H+H Celcon's, especially as regards the key issue of how customers might react in the event of a small but significant increase in the price of aircrete.

2.50. The survey questions were asked and answered on the basis of current price levels for aircrete blocks. Paragraphs 4.44 to 4.49 indicate, on the basis of standard accounting analysis that, at these price levels, H+H Celcon and MBM are both making substantial profits. This remains the case even when returns are calculated using depreciated replacement cost to value the assets involved, in that returns are substantially above the estimated cost of capital. H+H Celcon submitted that while this held for recent years, it did not hold over the whole of the last 12 years, which included the very depressed business conditions of the early 1990s as well as subsequent much more buoyant conditions.

2.51. This issue is explored in paragraph 2.88 onwards where it is concluded that aircrete block suppliers have nonetheless to some extent been able to sustain prices in recent years above the level that would be expected in fully competitive conditions. While the extent to which fully competitive conditions have or have not existed in recent years is not directly relevant to assessment of the merger, it is relevant to the SSNIP test, and therefore to the question of market definition. Specifically, to the extent that prices have been above fully competitive levels, the SSNIP test has been applied to price levels above the competitive level. This will bias the results to indicate more substitutability than would have been the case at competitive levels.[1] There is, therefore, some evidence to suggest that the extent of substitutability revealed in the responses to our questionnaire overstates the degree of substitutability relevant to defining the product market.

2.52. In addition to the responses to our survey, a number of reasons were given to us in correspondence and at hearings to show why there would only be a low degree of substitution in response to a 5 per cent price rise. These reasons appear to us to bear on the question of market definition. First, a number of housebuilders and builders' merchants have told us that housebuilders have a clear preference for the use of aircrete in walling construction because of factors such as its thermal insulation properties, its light weight, its consequent ease of handling and the fact that aircrete blocks can be worked easily. And indeed this is supported by the preponderance it has achieved in inner domestic leaf construction (see paragraph 2.26).

2.53. Second, some builders said they would face significant one-off switching costs if they sought to substitute aggregate blocks for aircrete blocks. Builders, we were told, would need to alter their working designs which, for major housebuilders, can extend across many types of dwelling construction and a variety of construction sites; added to which are changes in labour costs, additional procurement costs, changes in bills of quantities, health and safety issues, and the need, as appropriate, to obtain technical approvals from professional bodies such as the National House-Building Council (NHBC). Some larger housebuilders said that major alteration work to their standard sets of working drawings, described by one builder as 'very time consuming and costly', would be necessary; although, one commented that redesign costs were not significant because the company's designs allowed for the use of both aircrete and aggregate blocks. Labour cost changes arose, we were told, because aggregate blocks were heavier to handle, slower to lay and unpopular with a workforce currently laying aircrete; while procurement costs arose from sourcing and negotiating supplies of alternative materials, problems associated with interrupting long-term relationships with suppliers, and the risk of taking on unreliable new suppliers. Communicating changes to many sites, over 130 in one case, was another switching cost identified by some larger housebuilders. Although H+H Celcon considered that these difficulties were not too significant, we note that they derive

[1]This is most easily illustrated in the case of an actual monopoly supplier of a distinct product. The monopolist will have a profit incentive to raise prices to precisely the point where a further price rise would not be profitable. If the SSNIP test is applied at that point—that is, at actual rather than competitive price levels—then, necessarily, it will indicate that other products are in the same market even though this, *ex hypothesi*, is not the case. Applying the SSNIP test to the competitive price level, assuming this could be identified, would give the correct answer.

from strongly held views. In our view such costs will reinforce any reluctance to switch from one type of block to another.

2.54. It is unclear whether medium and small builders would be likely to incur different switching costs from those just mentioned. Though they will have fewer sites involved, their redesign costs could still be significant.

2.55. Some builders told us that a switch from aircrete to aggregate blocks could have a significant impact on the cost of construction as the use of aggregate blocks might lead to an increase in wall width. This would be due to the need for additional thermal insulation, especially since the new regulations governing this came into force on 1 April 2002. This increase in wall width could result in fewer houses on a site. One housebuilder estimated the equivalent cost to be roughly £15,000 to £20,000 per hectare, depending on the type of development. The only alternative to increasing the 'footprint' of a dwelling would be to reduce internal room size, which it found an unacceptable option.

2.56. However, other housebuilders did not believe it would be necessary to widen walls if aggregate blocks were used. In part, this difference in beliefs reflects different approaches to filling the wall cavity. A fully filled cavity allows for a thinner wall than would otherwise be feasible. But for some, fully filling the inner cavity of a wall is unacceptable, given the need, as they see it, for a cavity to secure against dampness penetrating. But the difference in beliefs appears also to stem from how well builders are informed about the different types of insulation materials available, some of which are less bulky than others. Finally, the difference of opinion may also be due partly to the different options available for ensuring compliance with the thermal regulations. These options are discussed in paragraph 3.86 and include, under what are known as the target U-value method and the carbon index method, the possibility of compensating for a less well insulated area of a dwelling (for example, a wall) by increasing insulation elsewhere, or installing more efficient heating systems. Hence, a significant increase in the footprint of a dwelling can be avoided, if that is seen as important.

2.57. A third factor influencing the response to a SSNIP test price rise is, as discussed in paragraph 2.42, that the total cost of a wall has been shown by the main parties and our consultants to be very similar whether aircrete or other materials are used. The main parties conclude from this that it demonstrates that aircrete and aggregate blocks are in the same product market and compete vigorously. However, on closer inspection this is less evident. As Table 3.12 shows, almost two-thirds of the cost of a m^2 of wall (the bricks and internal finishes) is unchanged whichever material is used; and the blocks themselves represent only between 7 and 9 per cent of the overall cost. In the case of aircrete, the example in Table 3.12 shows a cost per m^2 of £6.50 against an overall wall cost of £72.0 per m^2. For lightweight aggregate the corresponding figures are £4.80 and £73.05. The relevance of this to SSNIP test issues is that, because the blocks represent such a minor element of the total cost, a rise of 5 to 10 per cent in the price of aircrete is likely to have very little effect on the overall cost of a wall.

2.58. Thus a 5 per cent rise in the cost of aircrete would imply a change in the total cost of a wall of only 0.3 to 0.5 per cent. Even a 10 per cent rise would add only up to a 1 per cent increase in total walling costs. This low level of impact of a material increase in the price of aircrete, therefore, can be taken as a further disincentive to switch. For a typical house, however, H+H Celcon said that a 5 to 10 per cent price rise represented a cost of £60 to £120 per house; and that for a very large housebuilder, with some 14,000 dwellings annually under construction, this cost was considerable (£1.4 million). Such builders would, therefore, seek to avoid it by switching. On the other hand, one builder told us that the differences in the costs of the different materials would be less significant than the impact of a switch on design costs. It seems clear that housebuilders would need to be very price sensitive and face very limited switching costs to change from aircrete blocks in the event of a 5 to 10 per cent price rise.

2.59. According to information from our consultants, the average construction cost of a typical three-bed semi-detached house is £55,000, excluding land. £1.4 million would therefore represent only 0.2 per cent of the total (£770 million) costs of a 14,000 dwellings programme. Although this is a very small fraction of a builder's costs, H+H Celcon pointed out that a large proportion of construction costs consist of individually small amounts and that, therefore, builders would be keen to minimize them all. This seems understandable. However, in our view, in relation to aircrete blocks, the sum involved needs to be set against what appear to be quite powerful countervailing factors, namely the clear preferences we have been told that many builders have for aircrete and the costs associated with switching.

2.60. Further evidence on market definition comes from relevant factors that have been put to us concerning price correlations between aircrete and aggregate blocks and customer churn. We examine these below.

Price correlations

2.61. A correlation in aircrete and aggregate block prices over 15 years from 1987 to 2002 has been claimed by the main parties as evidence of vigorous competition between the two (see Figure 5.4). However, our own calculations from these figures show that the price premium of aircrete to both lightweight and dense aggregate blocks varied significantly over the period (see paragraph 5.70). It varied between being 6 and 52 per cent more expensive than lightweight aggregate blocks; for dense blocks the premium varied between 23 and 67 per cent. It is not clear, however, the extent to which the figures provided are truly representative. The price data were selected based on the professional opinion of quantity surveyors, aggregating price data from sometimes disparate sources, rather than from actual price data. Even where positive correlations could be detected it is necessary to consider common influences. The main parties told us that common input costs could not explain any price correlation, and this we accept, but a common trend in demand, primarily the demand for buildings using the different types of block, could not be excluded as a cause of price correlation.

2.62. The data in Figure 5.5 does, however, show a considerable price increase, 11 per cent, in aircrete from 1997 to 1998 to a level that is broadly maintained thereafter. The actual price data supplied by H+H Celcon and MBM for the five years to 2001 (see Figures 5.6 and 5.7), while not entirely consistent with the longer time series figures, nonetheless indicates that there has been a similarly considerable increase in their prices for aircrete in this period.

2.63. As further evidence, we collected a sample of aircrete, dense and lightweight block prices from builders' merchants' premises across England in a small random sample survey of some eight builders' merchants in each English region. We found that the differential between prices of aircrete and aggregate blocks in the different regions varied substantially from £3.88 to £0.33 (see paragraphs 5.73 to 5.75 for a discussion of this evidence). In contrast, the differential between light and medium density blocks is much more uniform. Price variations as between different regions are likely to reflect differences in builders' merchants' other costs, eg labour and land prices, but it seems less likely that these could explain differences in the differential between regions. However, the relatively high transport costs of aggregate blocks could explain variations in average aggregate block prices between regions.

2.64. Relevant to this is the evidence received from numerous parties that aircrete is priced to larger housebuilders as a national delivered price and deliveries are made throughout Britain from the limited number of aircrete production sites. Aggregate blocks are typically priced ex-works plus transport, supplied from a large number of individual production sites throughout the country, and usually delivered within a 40- to 50-mile range. As aggregate block prices appear to differ significantly from region to region, and as the transport costs element means that the delivered price varies from location to location within a region, it seems almost inevitable that the regional differential between nationally priced aircrete and locally priced

aggregate block will also differ significantly. There are, however, some limitations on the data. First, only retail price data were collected and these only represent approximately 25 per cent of all sales of aircrete. Second, the prices collected in our sample may not have been representative of the prices paid in each region. However, we have no reason to believe either from H+H Celcon's figures or our own, that regional price variations in aircrete are due to regional pricing of both types of block.

Customer churn

2.65. To support their arguments concerning substitutability, the main parties supplied examples of customer churn, that is, switching between aggregate and aircrete blocks. H+H Celcon supplied a list of 69 examples of customer behaviour which, it said, illustrated customers switching between aggregate and aircrete blocks. It appeared, however, that only about a dozen examples actually demonstrated switching in response to price, only five of which were since 1998/99. In many cases there was no evidence of actual switching or that switching was due to price. In addition, a number related to changes in demand from builders' merchants, reflecting distribution operations rather than switching in response to price. Some others appeared to relate to industrial uses rather than residential housing. It is certainly possible that in a competitive market, competition will be sufficiently intense for an existing supplier to act to avoid losing customers, so that little or no switching will take place. But we do not believe that this would be so prevalent in a competitive market as to preclude perceptible switching (or churn) on a quite significant scale. This would be particularly so if, as H+H Celcon has claimed, prices of different suppliers are well known to customers but not to each other.

2.66. H+H Celcon's information showed significant numbers of smaller customers discontinuing purchases of aircrete. There were also a small number of potential customers choosing aggregate blocks because of price differences with aircrete blocks. MBM also provided churn information, which focussed on builders switching from aggregate to aircrete blocks.

2.67. While, therefore, we accept that some switching can and does occur in response to price considerations, and no doubt there are examples of this in H+H Celcon's list, we do not view the list as having established or corroborated that there is ready substitutability as between aircrete and aggregate blocks in response to small but significant price differentials. Indeed, if the H+H Celcon list is a typical cross-section, it suggests that price is rarely an explicit or significant consideration in those cases where the two types of block are compared.

Other jurisdictions

2.68. H+H Celcon submitted copies of decisions by EC and German competition authorities. These decisions illustrated the different approaches taken by competition authorities to the definition of the product market. In particular H+H Celcon provided accounts of two recent (26 March 2002) decisions of the German Bundeskartellamt—on the Haniel/Ytong and Haniel/Fels merger cases.[1] We have carefully considered these decisions and the material submitted. In our view, however, every case depends on its own facts and circumstances, and we note that these decisions are not binding on the CC, which has to form its own view on the facts of this reference. The CC must operate within the boundaries of the jurisdiction afforded to it by the Act. Although decisions of other national competition authorities may be of interest and at times even persuasive, those decisions cannot bind the CC.

[1]Haniel Baustoff-Industrie Porebeton Holding AG; Ytong AG; Fels-Werke GmbH.

Prefabricated construction

2.69. Timber frame and other prefabricated construction techniques involve building the frame of the house out of timber or steel. The frames will normally have been preconstructed off-site with panels, such as plasterboard, fixed to the inside of the frame. A waterproof membrane is attached to the outside before building a brick skin. The technique is generally said to be quicker than masonry construction because much of the construction is off-site. According to our consultants, E C Harris, steel frame construction is 20 to 25 per cent more expensive than equivalent masonry or timber frame construction. Timber frames with brick facing on the exterior are comparable in cost with masonry construction (see Table 3.13). Timber frame construction is particularly popular in Scotland. According to NHBC statistics, it accounted for around 46 per cent of new build in 2001. The share in England and Wales was much lower at about 6 per cent and 8 per cent respectively. There appear to be a number of reasons for its popularity in Scotland. According to our consultants, E C Harris, the key ones are:

— the cost of timber frame with a rendered, rather than a brick, finish is considerably lower than other solutions and there is a tradition of rendered domestic buildings in Scotland, whereas in England and Wales there is much more a tradition of the walling outer leaf being fair-faced brick; and

— the 'window' of construction is shorter in Scotland due to weather conditions. Thus, the quick build times of timber frame construction are advantageous.

2.70. There are also a number of prefabricated panel-system construction techniques that utilize component systems based on prebuilt panels manufactured off-site which are then bolted together to form the house structure. The particular advantage of this kind of technique is said to be the speed of construction. Examples include Westbury plc's (Westbury) Space4 system, Marshalls Plc (Marshalls) Panablok system and H+H Celcon's new Jämerä system.

2.71. The main parties considered timber/steel frame and other prefabricated construction to be a candidate for inclusion in the definition of the relevant product market. This, they said, had become more evidently so since the publication of *Rethinking Construction*, the 1998 report of the Construction Task Force to the Deputy Prime Minister on the scope for improving the quality and efficiency of UK construction, chaired by Sir John Egan (the Egan report). The report made a number of recommendations designed to secure radical changes in the construction industry with the aim of it delivering its products in the same way as the best consumer-led manufacturing and service industries. Among these recommendations, the Egan report proposed a forum for improving performance in housebuilding. As well as the main parties, a number of others think that prefabricated forms of construction have growth potential, partly as a result of the Egan report, partly because prefabricated construction can be assembled more quickly and partly as a result of the increasing shortage of on-site labour skills for masonry work.

2.72. Prefabricated methods using aircrete have also been developed, together with other innovations designed to ensure that traditional masonry methods can match the main advantage of prefabricated techniques, namely their speed of construction. Some builders have examined the use of prefabricated techniques, a number of them are now using it, and there is evidence of one or two builders switching to these techniques and back, indicating the substitutable nature of this form of construction. According to NHBC figures, the percentage of buildings constructed with timber frame in Great Britain has increased from 6 to 10 per cent in the period between 1993 and the first quarter of 2002. In England, the proportion of timber frame houses constructed over the same period varies from between 2 and a maximum of 6 per cent. We do not doubt the significance of timber frame. But the statistics indicate that, although growth in timber frame has occurred, the growth rate has been quite slow, especially in England (see paragraph 5.80). Prefabricated construction has very low penetration of the residential

construction sector in Great Britain. Masonry accounts for some 90 per cent of inner leaves in new residential construction. While timber frame may well comprise much of the remainder, it is clearly a small percentage, with other methods accounting for even less.

2.73. The construction methods employed in timber frame construction are very different from traditional masonry construction—the labour skills required are different, and the switching process from one method to the other is likely to be more complex, costly and time consuming than switching between aircrete and aggregate blocks. It is clear to us, therefore, that while prefabricated systems are considered by many to have long-term potential to increase their share, over the shorter term, at least, there is unlikely to be any significant switching to timber frame or other forms of pre-fabricated materials as a result of a 5 to 10 per cent increase in aircrete prices.

Conclusion on demand-side substitution

2.74. Looking at all the evidence we have referred to above, we conclude that, despite the evidence that a thermally equivalent wall solution can virtually always be found using aggregate blocks, the relevant market in this case is for aircrete blocks. The three main reasons for this are: first, the evidence that a small but significant, non-transitory increase in prices would not lead to sufficient switching away from aircrete blocks to make such a price rise unprofitable. Second, there appear to be clear reasons for this, namely the very limited effect on the cost of house construction, the preferences that many housebuilders who use aircrete appear to have for the product, based on its physical properties and usage characteristics, and the costs involved in switching to construction using aggregate blocks. Third, the price data we have looked at does not appear to be consistent with aircrete blocks being in the same market as aggregate blocks.

2.75. We recognize that this does not preclude some examples of switching, and we believe that one-off price increases approaching 10 per cent above present price levels might well cause an increasing number of customers to review their purchasing decisions. But we have seen no evidence to persuade us that these points are enough to undermine the other evidence indicating an aircrete market, and we have also noted that the survey evidence is in any event likely to overstate somewhat the extent of substitutability relevant to defining the market.

Supply-side substitution

2.76. We were told that supply-side substitutability between dense and lightweight aggregate blocks is straightforward. However, there is no practical ability for supply-side substitution to take place between aircrete and aggregate blocks or vice versa as the manufacturing processes and capital requirements and associated know-how of the two are quite different. Indeed, the main parties told us there was little scope for any other building construction material manufacturer to switch quickly and easily to the supply of aircrete (see paragraph 5.87).

2.77. We conclude, therefore, that supply-side substitution considerations do not extend the relevant product market beyond aircrete blocks.

Conclusions on the relevant product market

2.78. From the above, the weight of the evidence points towards a conclusion that the relevant market is aircrete alone. The main reasons are:

(a) the evident unwillingness of the majority of housebuilder respondents to switch in reaction to a small but significant rise in aircrete prices. There is evidence that current

prices may be above competitive levels, so the impact of a 10 per cent rise in aircrete prices may exaggerate the underlying substitutability of aircrete and aggregate blocks;

(b) the clear preferences which housebuilders have for using aircrete in walling constructions;

(c) the costs, perceived and actual, associated with switching from one material to another;

(d) the probability that the very small impact on total, or stripped out, walling costs (see paragraph 2.30) of a 5 to 10 per cent rise in the cost of aircrete would act as a further disincentive to switch;

(e) that the correlations asserted by the main parties between aircrete and aggregate block prices over time did not appear to be substantiated. Indeed there is volatility over time, and geographically, in the differential between aircrete and aggregate block prices; and

(f) the absence of supply-side substitution between aircrete and aggregate blocks.

2.79. We therefore conclude that the relevant economic product market for this inquiry comprises aircrete blocks.

The geographic market

2.80. The main parties have argued that the geographic market is the UK. They said that aircrete prices are set on a national basis and that deliveries from their plants go to virtually every part of the country. In most cases the source of aircrete supplies will be of little if any significance to a housebuilder, provided deliveries are reliable. The market geographically is therefore likely to be national. However, there are no aircrete supplies by the three British-based manufacturers from Britain to Northern Ireland, where Quinn is the only aircrete supplier, and only a very small, up to 40,000m^3 or 1.3 per cent, movement the other way.

2.81. H+H Celcon also submitted a set of data that showed variances in the average gross price of aircrete blocks (of up to £13.50 per m^3) between geographical regions in Great Britain. The company said that although the data suffered from technical limitations, they revealed a broad picture which was wholly consistent with a national market. To the extent that regional price variations in aircrete existed (and could not be explained by data limitations), the company believed that they were largely due to regional pricing initiatives of aggregate concrete block suppliers.

2.82. Accordingly, we conclude that the relevant geographic market is Great Britain.

The public interest

2.83. In considering whether the proposed merger might be expected to operate against the public interest, we look first at the market shares of the merged company in the supply of aircrete; then at whether the constraints that might operate on it would be sufficient to prevent it from exploiting its enhanced position in the aircrete market, in particular by raising prices; next at other possible adverse effects of the merger; and finally whether any public interest benefits would be likely to flow from the proposed merger, before reaching the CC's overall conclusion on the public interest.

Market shares

2.84. The merged entity would have a very high share of the volume of output of aircrete blocks (corresponding to 1.9 million m^3 or 66 per cent of the aircrete industry on present levels of production). In terms of the Herfindahl-Hirschman Index (HHI), market concentration would move to 5,400 from an already highly concentrated 3,256. In principle this degree of concentration could give the new firm enhanced ability to raise prices successfully.

Possible constraints operating on the merged company

2.85. The possible competitive constraints identified during the inquiry arise from the potential for:

(a) competition between the remaining suppliers of aircrete blocks (inter-firm rivalry);

(b) entry into the market (including imports); and

(c) buyer power of housebuilders and builders' merchants.

Competition between the remaining suppliers (inter-firm rivalry)

2.86. Faced with a price increase by the merged entity, its customers would be able to shift their source of supply within the market to aggregate blocks only if Tarmac,[1] the remaining aircrete supplier in Britain, had the capacity to meet their needs. Examining first the scope for inter-firm rivalry between Tarmac and H+H Celcon/MBM, a critical issue concerns the options available to Tarmac in the event that H+H Celcon/MBM, with 66 per cent of aircrete supply, set prices above their competitive level. If Tarmac chose not to follow the price move, a substantial number of customers could realistically threaten to switch to Tarmac, which would render H+H Celcon's/MBM's price rise unprofitable.

2.87. Alternatively, given the relatively homogeneous nature of aircrete blocks, Tarmac could largely or completely follow the price rise. This assumes that price information would generally disseminate through the market. In the absence of any special factors it appears that, of the two strategies, Tarmac might well have a much stronger profit incentive to pursue the second, given that prices and profit margins would be higher without necessarily any significant impact on volumes. If so, the duopoly structure of the aircrete market could generate a substantial dampening effect on inter-firm price competition. Moreover, to the extent that Tarmac had only limited unused capacity, a strategy of maintaining lower prices would not make commercial sense.

Profitablity

2.88. We considered the financial performance of H+H Celcon and MBM based on returns on depreciated replacement cost of capital. This indicated that returns substantially above the cost of capital have been earned by both H+H Celcon and MBM in recent years. H+H Celcon told us, however, that there was nothing exceptional about the results and that its 11-year analysis (summarized in Table 4.4) demonstrated the cyclical nature of the aircrete business, and stressed that over this period its returns, taken as a whole, were reasonable in comparison with its stated (post-tax) weighted average cost of capital. It can be seen from Table 4.4 that while profits have been substantial in the last four years (to 2001), the returns in the early years

[1]And Quinn: see paragraph 2.110.

of the period, 1991 to 1993, were either negative or zero. In further explanation, the company told us that it had benefited from a number of efficiency gains and cost reductions. It also pointed out that there had been a dip in profitability since 1999.

2.89. We recognize that profitability is likely to vary over the business cycle. However, as Appendix 4.7 shows, H+H Celcon's sales volume has in recent years been more or less static. Capacity utilization has been high, average realized prices have risen significantly and then very largely maintained the higher levels achieved. If the companies involved are operating in a fully competitive market we would expect returns to be under more competitive pressure than appears to be the case, notwithstanding low or negative profits some nine to ten years ago. Equally we recognize that increased efficiency and cost reductions will generate higher profit, but in a fully competitive market we would expect to see much of the benefit feeding through to customers in the form of lower prices. However, as noted above, prices in recent years have risen significantly, again indicating some lack of competitive pressure.

2.90. MBM was unable to provide us with data prior to 1999. However, its returns on depreciated replacement cost of capital for the years 1999 to 2001 were similar to the returns earned by H+H Celcon in that period (see paragraph 4.49).

2.91. Further evidence regarding the extent of the profitability of the MBM business can be derived from the stand alone value which H+H International itself placed upon that business (before taking into account any synergy benefits arising from the merger) of around £80 million (see paragraph 4.53). This compares with our calculation (based on MBM's data) of the depreciated replacement cost of capital employed in MBM of £[✂] million (see Appendix 4.8). On the basis of these figures it appears that the rate of return on capital employed in MBM must be significantly greater than the cost of capital. If it were not, then the market value of MBM should roughly equate to its depreciated replacement cost of capital employed.

2.92. In response to this H+H Celcon argued first that they were also acquiring intangible assets, such as the skills and expertise of staff and customer goodwill. There is no way of knowing the value of such intangible assets. However, there must be some doubt that they could amount to a [✂] to the tangible assets in the case of an aircrete block manufacturing business.

2.93. Second, H+H Celcon said that it would be inappropriate to ignore the synergies arising from the acquisition. Whilst we accept that the synergies were significant and could well have influenced the decision to buy MBM, the basis of the valuation of £80 million explicitly excluded the synergies from the calculation, as they were valued separately.

2.94. In the light of this, we think the more likely explanation for the apparent discrepancy between the stand-alone value placed on MBM by H+H Celcon and MBM's depreciated replacement cost of capital employed is the existence of sustainable excess profits, arising from a lack of competition.

Inter-firm rivalry

2.95. More generally on inter-firm rivalry, H+H Celcon also said that it believed Tarmac had significant unused capacity, which would give it an incentive to undercut H+H Celcon. Moreover, if Tarmac (and prospectively Thomas Armstrong) reached any agreement on prices with the merged company, it would jeopardize their aggregate block sales because these were, or would be, made to the same customer base as their aircrete sales.

2.96. Second, H+H Celcon noted that the production of aircrete was characterized by high fixed costs. In these circumstances suppliers would have very strong incentives to maximize their sales in order to maximize production and reduce their average costs.

2.97. Third, H+H Celcon also pointed out that the market shares of the companies would be very different; and while companies of similar size might theoretically refrain from price competition, this could not be anticipated where companies were very unequal in size, with a strong incentive on the smaller companies to gain market share. It pointed out that the appeal of independent competition was greater for smaller firms, as represented by Tarmac's aircrete operation and Quinn as well as by Thomas Armstrong's proposed entry, because of their correspondingly smaller share of industry profits. In Thomas Armstrong's case it was imperative for it to try to achieve its market share goals; otherwise its investment would be lost. It would therefore have no interest in refraining from price competition in the manner suggested. Similarly, H+H Celcon itself would have no such incentive, either, to reach any agreement over prices that would prevent it from winning market share, as such a strategy would render its investment in new capacity at Pollington a waste of money. The main parties also drew attention to Quinn as another potential source of inter-firm rivalry in aircrete.

2.98. Finally, H+H Celcon disputed the idea that suppliers' prices would be known to each other. It said that individual suppliers' prices were very opaque to other suppliers. If so, this would allow a competitor with spare capacity to undercut a higher-priced competitor via discounts or rebates to specific customers, thereby gaining market share and ultimately rendering a high price strategy infeasible.

2.99. Generally, we remain agnostic on the issue whether competitiveness as between companies of equal size is greater than in situations where their shares are asymmetrical. We note that Tarmac has indeed indicated to us that it has some spare capacity. From the information provided, however, it appears that it could produce up to only another 145,000m^3 or 5 per cent of current market requirements, and under its future investment plans capacity will increase by another 5 per cent, 150,000m^3 in 2003. By contrast we note that the merged firm will have 66 per cent of current total volume output in Britain. The extra capacity at Tarmac, therefore, is unlikely to act as a sufficient constraint on the merged firm. Quinn has estimated its spare capacity at 16,000m^3, which represents about 0.6 per cent of current sales of aircrete. While in principle Quinn offers a second alternative supplier to the merged company, in practice this level of spare capacity, located in Northern Ireland, would appear at best to offer only the most limited scope for switching in the event of uncompetitive prices or performance from H+H Celcon/MBM.

2.100. Thomas Armstrong estimated that its expected production volume would be 100,000m^3 which, on the basis of information we were given, is planned to be in full operation by 2005. This would add only about 3.4 per cent to the present total industry output. It is unlikely, therefore, significantly to increase scope for switching such as to bring strong pressure to bear on the merged firm's pricing, and in any event will not have any effect for some three years.

2.101. We accept that there is likely to be more incentive to compete on price in a capital-intensive industry where capacity utilization is an important determinant of profitability as compared to a less capitally intensive one. But the key question for us is to what extent H+H Celcon and Tarmac would have a strong incentive to compete on price if both know that any price advantage and resulting increase in market share is very likely to be temporary. In our view this incentive is likely to be limited unless there was scope for price cuts and increased sales by one company to remain unknown to the other. This appears to be no less true for a firm with 33 per cent of the market than one with 66 per cent of the market.

2.102. As we have noted, H+H Celcon said that this situation would apply in that prices were opaque as between suppliers. Given the way in which invoicing is carried out in the market (see paragraphs 5.17 to 5.23), we have some doubts about this, but, in any event if a price cutting strategy had little or no effect on volume, it would not be commercially sensible to continue it; if it did, then, with essentially just two firms in the market, it would rapidly be apparent to the competitor that a price cut would be needed to retain volume. Given these

points, together with the relatively limited spare capacity available, we conclude that, after taking account of the circumstances of the market referred to by H+H Celcon, the incentives to intense price competition would still nonetheless be dampened by the duopoly structure of the market.

2.103. We also need to take into account H+H Celcon's investment in a new plant at Pollington in East Yorkshire. On the basis of figures supplied by the company, the capacity of this plant will equate to 19 per cent of current volume requirements in Britain. We initially understood that this plant was intended to produce large aircrete panels for use in H+H Celcon's new prefabricated Jämerä housebuilding system, and not therefore relevant to housebuilders' decisions on where to source aircrete blocks. However, H+H Celcon said that the plant could be configured to produce aircrete blocks, and in subsequent evidence to us treated this plant as directly increasing total market capacity in the supply of aircrete blocks. It is not clear, therefore, to what extent, if at all, we should take this capacity into account.

2.104. To the extent that it is relevant, three considerations arise. First, it clearly provides no new alternative supply for any customer who wished to switch away from the merged company. Second, it will increase the competitive pressure on H+H Celcon to lower prices, in order to utilize the new capacity. Third, it will increase the threat that any price reduction by Tarmac or, indeed, a new entrant seeking an increase in market share can be countered by the merged company. As a result, to the extent that such capacity is relevant to our evaluation of inter-firm rivalry for aircrete blocks, it is unclear what overall impact this new plant will have. But there is insufficient evidence for us to expect that the existence of this plant will eliminate the concerns we have expressed about the market power of the merged company, and it would, in our view, be unwise for us to rely on the company's own decisions on capacity to neutralize the market power we have identified.

Entry into the market

2.105. There is some uncertainty how much entry to the aircrete industry would cost. Initial costs of up to £20 to £25 million have been put to us. We have also been told by H+H Celcon and MBM that a substantial part of the costs of entry are sunk costs. According to the main parties there is a significant threat of entry into aircrete production from firms in Great Britain currently manufacturing aggregate blocks. The main parties have argued that the £20 million initial cost of new entry, excluding land, for a factory capable of a 400,000m^3 annual output, could be reduced greatly by acquiring second-hand plant; this could be as low as £2.8 million for a 150,000m^3 capacity factory.

2.106. Other parties have produced different estimates and views on the cost of entry. Thomas Armstrong has told us that it is spending between £[✂] million and £[✂] million on its new aircrete factory at Catterick, North Yorkshire, whose intended output is 100,000m^3 (3.4 per cent of current output in Britain) with a maximum capacity of [✂]m^3. The main parties, who believe that a factory of 400,000m^3 capacity (14 per cent) is planned by Thomas Armstrong, argue that this is evidence of entry taking place on a significant scale. As we have shown above, however, the reality is very different and very much more modest.

2.107. As well as the start-up costs, there is also the need to source the raw material for the plant and to surmount any technical barriers to entry. On the former, the key ingredients required for aircrete production are:

Cement
PFA
Aluminium
Anhydrite
Lime

2.108. No questions have been put to us about the availability of any of these materials except PFA, although one supplier raised the question of dominance by the merged company in terms of purchasing power for anhydrite. Some third parties have raised concerns whether there is sufficient available for new entrants after supplying existing manufacturers. The number of coal-fired power stations, which are the source of PFA, has been reducing. However, we understand that annual PFA production amounts to some 4.4 million tonnes, of which aircrete production currently absorbs some 600,000 tonnes (14 per cent). We have also been told that 51 per cent of PFA output is put into storage. PFA can be stored dry in silos, dampened in stockpiles or can be mixed with large quantities of water and pumped to storage lagoons where it is allowed to drain before recovery for sale. Although the use of PFA which has been stored for any length of time may present aircrete manufacturers with some difficulties (mainly because it has to be dehydrated), we have no reason to believe that it is not available in sufficient quantities for sale prior to going into store. In addition, as noted, sand is an alternative to PFA. Hence it does not seem that there is likely to be a real problem of availability of raw materials for new entrants, even though we have been told that fewer coal-fired power stations are producing PFA of the required quality.

2.109. As to technical barriers to entry, we have been told by the main parties that any patents have largely expired. Further, although H+H International has claimed in its annual report for 2001 that production of aircrete is a complicated process requiring special know-how, it appears, from Thomas Armstrong's experience, that the relevant expertise is available from consultants.

2.110. As to the incidence of new entry, there has been very little in recent years, the last being that of Quinn, in 1995, which began selling to Great Britain in 1997. We have received no evidence that further new entry, beyond that of Thomas Armstrong's limited plans, is a likelihood in the next two to three years. The scale, 3.4 per cent, and the timeframe (it is not expected to reach this level for three years) argues against our regarding this as significant in the near future.

2.111. On this analysis, therefore, our conclusion is that there is little likelihood of prospective new entry exerting more than a marginal constraint on the merged company for a significant period of time.

Imports

2.112. The main parties have maintained strongly that imports of aircrete are a very real possibility. They cite excess capacity at present on the Continent and have told us that aircrete production costs in Germany are so much lower than in Britain as to mean that the price of a consignment of aircrete from Germany at arrival in the UK (ie including transport costs) would not be materially different to the ex-works cost of aircrete produced in the UK. H+H Celcon and MBM have supported this case and we have been given examples of production and transport costs from a factory in Germany which are discussed in paragraph 5.141. However, there is no information that aircrete customers have looked at possibilities for imports apart from, notably, some isolated instances in the past to cope with temporary shortages in Great Britain. Nor has any evidence provided to us indicated that they had been approached by potential exporters to this country. So it is not at all evident that a 5 to 10 per cent price increase on aircrete blocks would incentivize UK-based customers to look to imports as an alternative to aircrete produced in the UK. Two major builders' merchants, Jewson and Travis Perkins, expressed doubts about the reliability and logistics of imports and, in Jewson's case, about whether supplies would be immediately available when needed although we have not seen any direct supporting evidence.

2.113. Therefore, taking account of the figures quoted by the main parties and the evidence of spare capacity, there have been no imports on any significant scale and we have not been

offered any evidence to support the main parties' contention that such imports are at all likely, despite the British industry's apparent profitability and lack of significant spare capacity.

2.114. Our conclusion, accordingly, is that the possibility of imports in the near future and on a scale large enough to deter price increases by the merged firm is a relatively remote one.

Buyer power of housebuilders and builders' merchants

2.115. Buyer power by housebuilders and builders' merchants was said by the main parties to be substantial, although the evidence on customers' ability to switch between the three present aircrete suppliers is mixed.

2.116. Figures supplied by them indicated that H+H Celcon's ten largest customers take almost half its sales, and the largest 20 in the case of MBM. Buyers have given the clear impression that they are well informed about alternative British sources of the supply of aircrete. We have also been told by the main parties, and others of consolidation in the house-building and builders' merchants sectors, that buyer power has been increased as a result of this and of decisions by smaller builders' merchants to form societies, such as the National Merchant Buying Society (NMBS), to act as procurement agents able to secure favourable terms from suppliers on a par with the larger builders' merchants.

2.117. Even so, it is clear that buyers face a high degree of concentration among aircrete manufacturers and a reduction effectively from three suppliers to two after the merger would reduce such buyer power as now exists. Customers of H+H Celcon and MBM will effectively have only one significant alternative supplier, which currently supplies one-third of market requirements and with spare capacity equal to only 5 per cent of the market. Customers of the merged firm could find alternative aircrete suppliers to only a limited extent; and even this limited opportunity presupposes that Tarmac would regard it as in its interests to avoid raising prices in tandem with H+H Celcon/MBM. The capacity restriction will ease slightly with the entry of Thomas Armstrong. However, as we have seen above, Thomas Armstrong's potential capacity (in approximately three years' time) will only be 3.4 per cent of current market requirements.

2.118. We have also noted the arguments put forward by H+H Celcon to the effect that the large construction company owners of some builders' merchants would have the financial support to source aircrete from abroad in the face of price rises in this country; that builders' merchants have every incentive to source all products at the most competitive prices; and that they would be able to discipline aircrete pricing by adjusting their aggregate block purchases, which would ensure that Tarmac and Thomas Armstrong would continue to price aircrete competitively, thus constraining the merged firm's freedom. But we do not believe that these are issues of major significance for this inquiry.

2.119. Buyers combining to induce new entry is a possibility but would take time and would be likely to depend on long-term commitments to purchase from someone not currently supplying aircrete blocks in Great Britain. In summary, countervailing buyer power might be a factor, but only if or when there was substantial new entry or if buyers were to turn to imports as a means of resisting any prices. The likelihood, however, of either of these possibilities being realized soon after the merger seems small. The lead time required to enter the market (that is acquiring a plant and sourcing raw materials), the possible perceived market power of existing aircrete suppliers and the entry barriers set out above may act as a significant deterrent to any new entrant. It would not, therefore, seem realistic to rely on these possibilities acting as a brake on aircrete manufacturers' behaviour. Moreover, the countervailing power of house-builders and builders' merchants is likely to be reduced and the balance of power to shift perceptibly towards aircrete manufacturers.

Summary of conclusions on the constraints

2.120. Given the large share of the aircrete market which the merged entity would have, we have carefully considered whether the merger would give the new firm enhanced market power. We have looked at whether various potential constraints would operate to limit the ability of the merged entity to exploit its strong position in the aircrete sector. We have concluded, however, that such constraints are unlikely to be strong enough or to be realized soon enough to have more than a marginal influence on the merged company. Our reasons are set out above in the discussion of the potential constraints in paragraphs 2.85 to 2.119.

Other effects on competition

2.121. Regulatory changes and the aggregates levy have been widely discussed in the context of the merger with a range of opinions as to whether or not aircrete is likely to benefit from them or be disadvantaged by them. Since 1 April 2002, Part L of the Building Regulations has been revised to increase thermal insulation standards in new dwellings and extensions. At the same time an Aggregates Levy has been introduced imposing a tax of £1.60 a tonne on virgin sand, aggregates and gravel, although the tax does not apply to materials used in chemical processes. Other regulatory changes are under discussion, notably an increase in sound insulation requirements within and between dwellings. There has been considerable debate as to whether, or the degree to which, aircrete manufacture benefits from the changes at the expense of aggregate blocks or prefabricated construction and vice versa. Our analysis is set out in paragraphs 3.85 to 3.96 and 5.152 to 5.161. Overall, the impact of the Part L changes appear to be ambiguous. Some think that aircrete blocks, having superior thermal performance, will gain from the changes. Others, including the main parties, argue that they will lose out because one big advantage of aircrete, that it could be used without additional insulating material, will be lost. With regard to the proposed sound insulation changes, it is too early to say how they will affect the industry. They are likely to favour aggregate blocks, which are better sound insulators than aircrete, but to what extent is not yet known. Nor is it clear how, if at all, the proposed changes would affect competition between aircrete and aggregate blocks. It seems clear, however, that the Aggregates Levy will act to the disadvantage of dense aggregate blocks.

2.122. Overall, therefore, we conclude that these changes are likely to have some effect on the relative attractiveness of aircrete blocks. The overall impact will depend on the relative strength of various effects pulling in opposite directions and is not clear at the present time. More significantly, whether ultimately they lead to more aggregate or more aircrete blocks being used, we have not seen any evidence that leads us to expect that these regulatory changes can be relied on to offset the market power that the merged firm will in our view have in the supply of aircrete blocks, and the contrary may turn out to be the case.

Public interest benefits

Benefits of the merger

2.123. Although one third party, Bellway plc (Bellway), considered that a reduction in the number of aircrete suppliers from three to two might make aircrete more competitive because of the expected reduction in H+H Celcon's and MBM's joint overhead costs, the benefits claimed for the merger by the main parties, discussed earlier in paragraph 2.37, appear to favour the merged company and/or its shareholders exclusively. With 66 per cent of the market, there would appear little pressure or incentive on the merged company to pass such savings on to customers. In this context we note that the valuation of the bid by H+H International assumed that all of the savings from the merger would accrue to the shareholders. Generally, therefore, it seems to us that there is no reason to believe that much, if any, of the £7.5 million

benefits anticipated from the proposed savings would be passed on to customers of the new enterprise.

Innovation

2.124. H+H Celcon has said that product innovation and development is one of H+H International's main objectives, especially given the competitive pressures from prefabricated construction techniques and the expected consolidation among Continental aircrete manufacturers. The merger would provide the new firm with the enhanced research and development (R&D) capacity which was a prerequisite for H+H International's ambitions to become globally as competitive as some of its other European counterparts.

2.125. Overall, however, the concrete block industry is not characterized by heavy spending on R&D and innovation, although some advancements have been made latterly in block design, such as the tongue and groove foundation blocks recently introduced by MBM. Also, H+H Celcon has invested £25 million in a new plant at Pollington (Yorkshire) to produce reinforced aircrete elements for its Jämerä whole house concept, which will be used in walls, floors and roofs. But it remains, in our view, very speculative as to whether it is necessary for the company to have such a large market share of aircrete to maintain or improve the past record of innovation. It is even more uncertain that any such benefits would outweigh the disadvantages we have noted.

Conclusion on the public interest

2.126. In examining the public interest issues in this inquiry, we have seen that the volume share of the company created by the merger would be very high, at 66 per cent, and that the merger would increase concentration in an already highly concentrated market. As noted, this level of concentration would in principle provide the merged firm with greater ability to raise prices above the level they would otherwise be. This could be offset if the possible competitive constraints were powerful enough to act as a brake on the market power of the company.

2.127. We identified three main areas of potential constraint on the new company:

(a) competition between the remaining suppliers;

(b) entry into the market; and

(c) countervailing buyer power.

2.128. As we indicate in paragraph 2.119, however, we have concluded that none of these constraints are likely to be enough to have more than a marginal impact on the merged company, at least for the foreseeable future. In particular:

(a) In the duopoly resulting from the merger, with Tarmac currently the only other significant participant, the combination of the lack of sufficient alternative capacity to that of H+H Celcon and MBM and the lack of incentive that the new firm would have to engage in intense price competition, leads us to conclude that rivalry between current manufacturers, including Quinn, would not be such as to provide adequate competitive constraints (see paragraph 2.102).

(b) There is little evidence that new entry and imports are likely in the near future apart from that of Thomas Armstrong. However, that will add very little (3.4 per cent) to current volumes. Our conclusion from these factors, therefore, is that new entry and imports are unlikely to deter the merged company from raising prices (see paragraphs 2.110 and 2.113).

(c) With regard to countervailing buyer power, we saw that the extent of any constraint depends on the likelihood of entry on a sufficient scale or on buyers themselves inducing entry or imports; and that none of these possibilities seem likely to be realized soon after the merger, not least given the necessary lead times. Here too, therefore, we conclude that buyer power will not act to restrain the merged company from increasing prices. Indeed buyer power is likely to be reduced (see paragraph 2.119).

2.129. We have also assessed the relevance of, in particular, regulatory changes, the synergies expected from the merger and innovation. In our view, although it is possible that one of these changes, the Aggregates Levy, will reduce any constraint on aircrete block prices which may arise from dense aggregate blocks (see paragraph 2.121), we view none of these changes as significantly altering the impact of the merger.

2.130. As to the possible public interest benefits, we have noted that there is no reason to believe that the expected synergies will to any appreciable extent be passed on to customers (see paragraph 2.123) and that the extent of any greater impetus to innovation resulting from the merger remains very speculative (see paragraph 2.125).

2.131. Having weighed all the factors summarized above, we consider that the merger would be detrimental to the public interest.

2.132. We therefore conclude that the merger may be expected to operate against the public interest with the following specific adverse effects:

(a) overall, prices for aircrete blocks would be higher; and,

(b) competition in the aircrete block market would be impaired;

compared with what would otherwise be the case.

Conclusions and recommendations

2.133. Where we have found that a merger situation operates, or may be expected to operate, against the public interest, we are required by section 72(2) of the Act to consider what action, if any, should be taken for the purpose of remedying or preventing the adverse effects which we have identified; and we may, if we think fit, include recommendations as to such action.

2.134. The main adverse effect we envisage resulting from the merger is that competition would be impaired and prices would be higher than they would be if no merger took place.

2.135. We therefore invited H+H International and H+H Celcon to comment on possible remedies which might permit the merger to go ahead. The companies told us that in the event of our finding it necessary to recommend behavioural or structural remedies, their preference would be some form of temporary price control, a suggestion they had discussed with the OFT. The main issues in this connection are how any such controls might be calibrated and how long they might remain in place. H+H International proposed that any price cap should be of limited duration, namely the shorter of either, for example, two years or until such time as a new competitor to aircrete manufacturing, such as Thomas Armstrong, achieved a specified share of UK supply. Neither the calibration nor the duration is straightforward.

2.136. We considered two main variants of a price cap. The first was based on an 'RPI minus X' formula. The second variant was price cap based, not on the RPI or another external index, but on a weighted basket of aircrete production costs, presuming appropriate indices could be determined. A key question with the first variant was what value should be attached to

'X' in order to secure an outcome in which the price of aircrete after the merger rose by no more than it might have done in the absence of the merger. Without appropriate cost and demand estimates, it was not clear how this could be assessed. In theory the second approach, if it were based on a cost plus formula, could eliminate exploitation of the market power of the merged company in the form of extra profit. But we consider that there is a significant risk that it would in effect, provide a cover for the passing on of costs which might otherwise have been absorbed in a fully competitive environment.

2.137. Moreover, under either approach, measuring and monitoring prices would be complex, given that there are nine main aircrete products and different prices, discounts and rebates for different customers, although it might be possible to reduce the scale of the complexity by focusing only on a standard aircrete block, and/or monitoring realized revenues per block, thereby incorporating rebates and discounts. More generally, to introduce price controls into a non-utility industry such as construction might in any case be an undesirable extension of regulation to be adopted only if more pro-competitive remedies are not available. It would represent a significant interference in the operation of market forces, and would introduce further distortion, in that the controls would apply to only one supplier in the market, albeit the largest one.

2.138. There are also problems with the duration of any such control: whether it should be for a fixed period, or linked to market developments, for example, to remain in place for an undefined period until the merged company's market share fell below a threshold or until new entrants and others had achieved a specified share of supply. H+H International, in commenting on the possibility of an indefinite price cap, said that it would need to give very serious consideration to a measure that restricted its commercial freedom indefinitely. We agree that an indefinite regulatory regime is to be avoided if at all possible.

2.139. However, the company's suggestion was based on the main parties' assumption that Thomas Armstrong's capacity would equate to about 14 per cent of aircrete supply in Britain within a short period. In fact, Thomas Armstrong's intended capacity will only gradually build up over a period of three years or so; and then to a level which equates to only about 3.4 per cent of current annual supply. Therefore, with little prospect that a large-scale new entrant might emerge in the near future, this option would appear to be neither feasible nor apt.

2.140. The only practical alternative to price controls, short of blocking the merger, would be to secure structural change directly by requiring the new company, as a condition of approving this merger, to divest itself of one or more of the six aircrete plants which it would operate. We asked both companies for their reactions to this possibility. H+H International regarded a remedy involving the divestment of even one plant as disproportionate, but it identified disposing of one of [*Details omitted. See note on page iv.*], as the least worst option. The company said, however, that very serious consideration of the commercial impact of the remedy on the deal would be necessary and would require renegotiations with Etex and H+H Celcon's own its bankers. Divestment of one plant would, they said, simultaneously reduce the merged entity's market share and create a fifth UK-based supplier. If it was considered that the creation of a further competitor through forced divestment was required, it was impossible to see why this should extend to more than one plant. MBM, in looking at the same type of possible remedy, also said that the issue would be one for H+H International.

2.141. Other things being equal, divestment of either of the plants mentioned would reduce the merged entity's share of aircrete supply by [✂] per cent or so to about [✂] per cent. Therefore, even allowing for the entry of Thomas Armstrong, there seems little reason to suppose that divestment of just one of those plants would sufficiently reduce the prospective degree of concentration in the aircrete industry. If two plants were divested, this would bring capacity closer to an acceptable level. The capacity of the merged firm would still be high, at 40 per cent or so of the market. The concerns we have had regarding the market power of the merged

company would clearly be reduced, primarily because there would once again be two significant alternative suppliers to the merged firm. However, we are doubtful that this would fully eliminate the adverse effects of the merger. Given the time available we have not been able fully to assess this, and we cannot therefore discount the option completely. But we recognize that it might well be very disruptive and would require monitoring by the OFT to decide which plants were sold to which firms. We note that H+H Celcon was strongly opposed to this option.

2.142. The third choice in this situation is for the merger to be prohibited. Considering this as a possible outcome, MBM said that [
Details omitted. See note on page iv.
]. H+H International said that refusal to allow the merger to proceed would be a devastating blow to the opportunities they envisaged for developing R&D and engineering techniques as a means of beginning to convert their operation into a global concern and to compete, in that respect, alongside major firms in Germany such as Ytong and Hebel AG (Hebel).

2.143. It seems to us that a structural solution is to be preferred to a behavioural one as a means of ensuring an ongoing competitive environment. We also consider, as noted above, that the latter should be deployed only in circumstances where an appropriate structural solution is not available. In this case there are factors, which render a behavioural solution (in this case, price controls) both difficult to define and administratively complex. Partial divestment is the structural alternative, but there do not appear to be any divestment possibilities that would ensure a properly competitive scenario even if H+H International were to accept divestment of two plants. We recognize that there could come a time when, either because of further expansion by Thomas Armstrong or another new entrant, or as a result of the introduction of regular and sizeable shipments of aircrete blocks from abroad, competitive pressures might improve to the point where the proposed merger would not have adverse effects on competition. But these circumstances are not, in our view, likely in the near future. Given our concerns about the alternative possible remedies considered above, the only solution which would offset the adverse effects we have identified is one in which the merger does not go ahead. In our view, this solution would be both proportionate and necessary to address the adverse effects of the proposed merger. We have not been able to preclude the possibility that divesting two plants would remedy the adverse effects, but it is not clear that this would be practical or commercially sensible. Accordingly, our preferred recommendation is that the merger be prohibited.