

# 6 Conclusions

## **The merger situation**

6.1. Under the reference dated 5 April 1988 (made under sections 64 and 68 of the Fair Trading Act, 'the Act'), we are required to investigate and report whether a merger situation qualifying for investigation has been created, in that enterprises carried on by or under the control of Gang-Nail Systems Inc (of which one at least was carried on in the United Kingdom) have within the six months preceding the date of the reference ceased to be distinct from enterprises carried on by or under the control of MiTek Industries Inc. For this purpose, we would have to be satisfied that the result specified in section 64(1)(a) of the Act had occurred by fulfilment of the condition in section 64(2) in respect of the supply by a manufacturer in the United Kingdom of punched metal connector plates and related machinery used in the manufacture of prefabricated timber roof trusses.

6.2. As was noted in paragraph 3.1, MiTek Industries Inc (MiTek) acquired Gang-Nail Systems Inc (GNS Inc) according to the terms of an agreement dated 6 November 1987 the purchase having been completed on that date. We therefore conclude that enterprises carried on by or under the control of GNS Inc, including that carried on within the United Kingdom of Gang-Nail Systems Ltd (Gang-Nail), have ceased to be distinct from enterprises carried on by or under the control of MiTek.

6.3. The former subsidiary of GNS Inc—Gang-Nail—accounted in 1987 for some 32.2 per cent of the sales by manufacturers in the United Kingdom of punched metal connector plates and related machinery used in the manufacture of prefabricated timber roof trusses. The subsidiary of MiTek—Hydro-Air International (UK) Ltd (Hydro-Air)—accounted for some 43.8 per cent of those sales. The combined share of Hydro-Air and Gang-Nail following the merger is about 76 per cent on the basis of 1987 figures. We have no reason to think that this situation has materially altered. We therefore conclude that the condition described in section 64(2) of the Act is satisfied in respect of the supply of goods described in the reference and that the result specified in section 64(1)(a) has occurred. Although the test specified in 64(1)(b) of the Act was not in this reference excluded from our consideration, we have, in view of our conclusions as regards section 64(1)(a), thought it unnecessary to consider whether this test too is satisfied.

6.4. We accordingly conclude that a merger situation qualifying for investigation has been created. We have therefore subsequently to investigate and report on whether the creation of the situation operates, or may be expected to operate, against the public interest.

## **The market for connector plates and related machinery**

6.5. Punched metal connector plates are used primarily to fasten the joints in prefabricated timber roof trusses. Prefabricated timber trusses provide a highly efficient form of roof construction, with significant savings both on labour costs and on timber, and are used in over 80 per cent of domestic roofs, and an increasing proportion of industrial and commercial roofs. For the bulk of domestic roofs (which account for the majority of sales of roof trusses), there are at present no economic alternatives to the use of prefabricated timber trusses fastened with punched metal connector plates.

6.6. The total value of sales of connector plates and related machinery in 1987 was some £12 million, the majority of which was accounted for by sales of

connector plates. MiTek expects the size of the market to grow, with the increasing use of prefabricated trusses in industrial and commercial buildings. Present sales by manufacturer are shown in Table 6.1.

TABLE 6.1 Value of sales of connector plates and related machinery in the United Kingdom, 1987

	£m	%
Hydro-Air (inc Bevplate)	5.3	43.8
Gang-Nail	3.9	32.2
Hydro-Air and Gang-Nail combined	9.2	76.0
Truswal	} 2.9	24.0
Twinaplate		
Total	12.1	100.0

Source: MMC study.

It appears that all four companies enjoyed fairly high net margins on turnover and return on capital.

6.7. The connector plates are manufactured by punching out rows of integral nails to project at approximately right angles from one face of the plate. The process for manufacturing the plates is simple, but in the United Kingdom the plates are supplied to truss fabricators in conjunction with sophisticated proprietary computer-aided design programs as part of a complete truss fabrication system. The cost of these design programs is included in the price of the connector plates, and the supply of plates can therefore be regarded as including the provision of the associated computer software.

6.8. The clients of the truss fabricators (builders, architects or specialist roofing consultants) specify *inter alia* the slope, span and pitch of the roof and the timber required; the fabricator uses the relevant program to produce a detailed design of the truss, including the types and quantities of the plates to be used and their required location. The software allows very complex roof truss designs to be produced by the truss fabricator, although this may also be done by the system suppliers' own engineers. Some software developments also have facilities for total roof designs.

6.9. The licence agreement between the truss fabricator and the plate manufacturer specifies that the software can only be used in designs for fitting the manufacturer's own connector plates. The software supplied to the fabricator incorporates the loading characteristics of only the manufacturer's own connector plates; although in practice it would not be difficult to provide software which could be adapted to different designs of plate if the manufacturers so chose.

6.10. The plate manufacturers also supply fabricators with the equipment—for example, cross-cut saws and rollers or presses and jigs—for the assembly of the trusses. Generally, however, connector plates can be fitted using equipment supplied by other plate manufacturers.

6.11. Although the total value of sales of connector plates and related machinery in the United Kingdom is small, and accounts for only about 10 per cent of the cost of roof trusses, the products and services supplied by the plate manufacturers are crucial to the operations of the 140 or so truss fabricating companies. The connector plate manufacturers, in particular Hydro-Air and Gang-Nail, introduced prefabricated timber roof trusses to the United Kingdom in the mid-1960s by offering a complete fabrication system, mainly to timber merchants who had little or no previous experience in this area; the subsequent development of the systems by the plate manufacturers has enabled the fabricators, some of whom have little structural engineering expertise, to undertake increasingly complex designs. Most fabricators use only one of the available fabrication systems, and it is not easy in practice to change from one system to another. Relations between the truss fabricators and the plate

manufacturers are close, and our questionnaire survey of fabricators showed a high degree of satisfaction with the products supplied and loyalty to their existing suppliers.

**Issues** 6.12. As discussed in paragraph 6.2, the overall merger was between two United States corporations, both with United Kingdom subsidiaries which account for only a small proportion (less than 15 per cent) of the total turnover of those two corporations. We understand (see paragraph 5.2) that the intention of the merger was primarily to improve the competitiveness of the merged company in the United States market; after the merger, MiTek became the largest supplier of connector plates in the United States but with a market share of less than 25 per cent. Although we have had to take account of the general circumstances of the merger, our concern is with its effects in the United Kingdom market. The merger was completed in November 1987, some five months before the date of the reference, but this period is still too short to show its actual consequences; in the public interest context, therefore, we are concerned with whether the creation of the merger situation 'may be expected' to operate against the public interest. The main issues relevant to the public interest are the effects on competition, and on price and innovation and other aspects of performance in the United Kingdom.

**Effect on competition** 6.13. Hydro-Air and Gang-Nail account for some 76 per cent of the United Kingdom market for connector plates and related machinery. Prior to the merger competition between the two firms was strong, mainly in the development of computer software. It was put to us, for example, that there was a leapfrog situation between the two market leaders, producing a constant improvement and updating of software. Competition provided fabricators with a choice of system, and an alternative source of supply should software, service standards or price levels prove unsatisfactory. Our survey confirmed that some fabricators had changed systems in recent years, particularly in order to obtain better software, including some who had switched between Hydro-Air and Gang-Nail. Some of the fabricators to whom we talked also told us that they had benefited from price competition between Hydro-Air and Gang-Nail. In this small, specialised market, we therefore believe that the choice of available fabrication systems, the incentive to maintain the development of products and services, price and standards of service all depend critically on healthy and active competition; and that any significant reduction in the level of competition could have a serious impact on each of these factors.

6.14. Following the merger, it is intended by MiTek that both the Hydro-Air and Gang-Nail systems should continue in operation, and that customers should still have the choice between them. MiTek acknowledged, however, that some co-ordination of software development is to be expected, and that it was possible that, in time, the two companies could tend to specialise in different sectors of the market (see paragraph 5.9). We were also told that each company's salesmen would no longer actively seek business from the other, although customers would still be free to choose between the systems if they wished. There would seem little question, therefore, that competition between the two companies will be significantly diminished by the merger, and that the merger will remove what to date has been the prime source of competition in the supply of connector plates in the United Kingdom.

6.15. MiTek argues that there was strong competition between the truss fabricators, and if its customers were concerned about the performance of the combined companies, they would switch their custom elsewhere. We have therefore considered the strength of competition from other firms in the market, and the scope for new entry into the industry.

6.16. The number of firms supplying connector plates in the United Kingdom has reduced, from eight some ten years ago, to only four prior to this merger, one of the previous competitors—Bevplate—having itself been acquired by Hydro-Air

in 1985. Of the two remaining competitors to Hydro-Air and Gang-Nail, Twinaplate described itself to us as occupying a 'niche' in the market rather than competing on any scale. The other, Truswal (a subsidiary of the third largest supplier of connector plates in the United States), took steps to improve its competitive position a couple of years ago, and has recently attempted to gain some marketing advantage from the merger. These two existing competitors together account for only some 24 per cent of the market between them, which may suggest that the majority of fabricators have not to date regarded them as generally competitive with Hydro-Air or Gang-Nail. We do not therefore believe that competition from these two companies—of which one competes mainly in a particular market 'niche'—could be as effective as that between the two market leaders prior to the merger.

6.17. Indeed, both Truswal and Twinaplate, and a number of fabricators, expressed concern about the ability of the combined companies to compete unfairly, and possibly to drive their competitors out of the market. Following the merger, the combined companies would be in a strong position—they could, for example, concentrate their present sales effort on the customers of their competitors, and offer discounts or other incentives to attract business from them. However, it would not be easy to drive the smaller firms out of the market, and it is unlikely that MiTek would deliberately attempt to do this. Both competitors are profitable, and both appear to be determined to stay in the market; their customers may also be unwilling to change system in response to lower prices that could prove only temporary. However, Truswal and Twinaplate are likely to be at some disadvantage in competing with MiTek in the longer term, for example, given their smaller customer base, in financing the development of software.

#### **Prospects for new entry**

6.18. No new suppliers have entered the United Kingdom market in the last five years, but we are aware of two overseas firms planning to commence sales here (see paragraph 4.12). One of these has specialised in industrial and commercial construction in its home market, and the other intends at this stage to export from its home base. It is too early to judge how successful their operations in the United Kingdom will be.

6.19. There are a number of technical difficulties in entering the United Kingdom market. Differences in requirements and standards between countries impose some constraint on trade—both the plates and the associated design programs may need adaptation and testing for different national markets. One of the major truss fabricators suggested that adaptation of software for the United Kingdom market could take between two and three years. Entry would be extremely difficult without a certificate from the British Board of Agrément (although this is not mandatory); procedures for obtaining such a certificate, although not unreasonable, are likely to impose some inconvenience on new entrants, with a minimum cost of £10,000 to £12,000 and an approval procedure of up to nine months. In practice, however, we do not believe that any of these technical difficulties are sufficient to deter a determined new entrant to the market.

6.20. Estimates we have received from manufacturers suggest that the costs of entering the United Kingdom market with a complete fabrication system may be between some £360,000 (with a plate made under a licence and an existing software package adapted and licensed for use in the United Kingdom) and £1 million. A new entrant may also have to provide continuing improvement in software to match that of MiTek whose total expenditure in the United Kingdom on computers alone exceeds £1 million per annum. Given the small size of the market (some £12 million per annum), a high market share would be necessary to afford the software development that competed with MiTek. It may be particularly difficult for a new entrant to establish a sufficient market share given the dominance of the combined companies, their ability to retain customers by discounting, and the cost to fabricators of switching from their established systems. The number of potential entrants to the market is also limited since the market elsewhere in

Europe is generally less developed than in the United Kingdom, and MiTek is itself the leading supplier in most European countries where connector plate systems have been introduced.

6.21. MiTek referred also to the scope for supply in the United Kingdom of plates on a 'commodity' basis, with the software separately provided from a software house. There is no technical reason why plates should not be provided separately from software, but it is in the interests of the established suppliers to maintain the present tie of software to their plates. The supply of plates on a commodity basis accounts for some 20 per cent of the much larger market in the United States; and this option may be considered in the United Kingdom. To date, however, this approach has not been adopted in the United Kingdom, and it is still uncertain whether it would be viable in the much smaller United Kingdom market. It is therefore likely to be as difficult, if not more difficult, for a plate supplier and a software supplier to enter the market separately, as for a new entrant providing an integrated system.

6.22. MiTek also referred to the scope for truss fabricators themselves to produce plates and software; we have been told that this option has been considered by a number of fabricators, but not been acted upon. None of the fabricators has a large market share and it would therefore be uneconomic to produce plates solely for its own use; but there is also a fear that fabricators would not like purchasing plates from their competitors.

6.23. The market in the United Kingdom is therefore likely to remain difficult to enter successfully, in part because of its small scale. While some entry may be expected, it is unlikely to be on a sufficient scale to compensate for the loss of competition between the two previous market leaders.

6.24. We believe, therefore, that the merger may be expected to operate against the public interest, by reason of its adverse effect on the public interest of reducing the level of competition in the supply of connector plates and related machinery in the United Kingdom, and, in the longer term, the choice of systems available to fabricators. Competition has brought significant benefits to the users of these products; by reducing competition, the merger may also be expected to result in the adverse effects of less incentive to maintain the development of products and services, higher prices and lower standards of service, than would be the case in a more competitive situation.

#### **Other effects of the merger**

6.25. A number of other concerns were expressed to us. It was, for example, suggested that MiTek, with such a high share of the United Kingdom market, and a large share of several other main European markets, could be in a position to exert an undue influence on the setting of technical standards in the United Kingdom and elsewhere in Europe, to the detriment of its competitors. There seems, however, to be sufficient involvement of other interests, such as Government agencies and fabricators themselves, in the setting of such standards to ensure that MiTek could not abuse its position. A number of fabricators also expressed concern that the combined companies could discontinue one of their present truss fabrication systems. We doubt whether it would be in MiTek's interest to reduce the number of systems in the short term, although in the longer term we think it is unlikely that the independent development of the systems will be maintained and some convergence of the systems would seem inevitable in order to share development costs.

6.26. We have considered whether there are any benefits to the United Kingdom from the merger. MiTek argues that the combined companies would share in the benefits of the merger of the international activities of MiTek and GNS Inc. However, these benefits arise as a result of the merger of the United States companies, and would still be available to the United Kingdom through Hydro-Air irrespective of Gang-Nail's operations in the United Kingdom. MiTek also argued that the merger would result in a greater opportunity to spread

technological developments into a wider sector of the United Kingdom construction industry; in our view, technological development and its dissemination in the United Kingdom will be provided more effectively by maintaining competition between the two United Kingdom plate manufacturers. Increased exports would also seem unlikely, since MiTek already has manufacturing outlets elsewhere in Europe.

## Conclusions

6.27. We therefore conclude that the creation of the merger situation qualifying for investigation which we have identified may be expected to operate against the public interest. The particular effects adverse to the public interest which, in our opinion, the creation of the situation may be expected to have are those described in paragraph 6.24.

6.28. We are, therefore, required to consider what action (if any) should be taken for the purpose of remedying or preventing these adverse effects. We considered whether there was any action that could be taken, short of divestment of Gang-Nail, which could remedy the adverse effects which we have identified. We considered a number of suggestions by fabricators—for example, for increased regulation of the industry; but none in our view would be sufficient to remedy the adverse effects. MiTek told us that it would be prepared to provide assurances (which would no doubt be embodied in appropriate statutory undertakings) that it would continue to maintain and actively market both the Hydro-Air and Gang-Nail trademarks, with a fully adequate range of connector plates and full system support, so long as it was completely economically viable to do so. This assurance might go some way to meet the concerns of those fabricators who are customers of Gang-Nail who fear the discontinuation of the Gang-Nail system, but would not in our view be sufficient to maintain competition in the market for connector plates and related machinery in the United Kingdom. MiTek also offered an assurance that any innovation or evolution in any sector of the business made in any other country where the MiTek group operates would be made available to both Gang-Nail and Hydro-Air in the United Kingdom—as well as the benefits of whatever innovation they do themselves. In our view, this assurance (even if embodied in appropriate statutory undertakings) would similarly meet only in part our concerns that, by reducing competition, the merger could remove the incentive to innovate in the United Kingdom market; the monitoring of such an assurance would also be far from straightforward. We do not therefore believe that these assurances would be sufficient to remedy the adverse effects of the merger. Accordingly, we consider that in the circumstances of this market, divestment is the only remedy that would maintain effective competition.

6.29. However, we have also had to have regard to the circumstances of the merger. As mentioned in paragraphs 3.1 and 3.11, Gang-Nail previously operated as a subsidiary of GNS Inc, which in turn was a subsidiary of Redland PLC. We were told that Gang-Nail had taken advantage of relationships with its sister companies in Australia, South Africa and Europe, and also with Redland. MiTek argued that in the event of divestment, Gang-Nail could not compete as effectively as it had done in the past as part of GNS Inc.

6.30. Gang-Nail is a small but efficient and profitable company well able, we believe, to compete independently in the United Kingdom market, and possibly elsewhere. It has a sizeable and satisfied customer base. Its current software was developed in the United Kingdom, although the engineering design originally came from the United States. MiTek's own view is that copyrights or patents would not present any serious obstacle to Gang-Nail operating independently in the United Kingdom; we share this view; and also do not think that trade names would present any significant problem to Gang-Nail's operations in the United Kingdom given the generally small scale of external trade in these products. Although

Gang-Nail has received some advantages from its connection with its United States parent, it could gain similar advantages from an association with any other company with software expertise, but active in a different industry in the United Kingdom. However, we do not regard such an association as necessary for its success as an independent company. We do not believe, therefore, that there are any significant disadvantages in the divestment of Gang-Nail from MiTek. Such a remedy would, we believe, maintain competition in the market for connector plates and related machinery in the United Kingdom.

6.31. We therefore recommend that, within three months from the date of publication of our report, MiTek should divest itself of Gang-Nail Systems Ltd (Gang-Nail) in order that Gang-Nail should pass into ownership and control distinct from and independent of MiTek's. We consider that, if MiTek should not give a satisfactory undertaking to this effect, steps should be taken, if necessary by the making of an order, to achieve the divestment promptly. We further recommend that until such divestment has been completed, steps should also be taken to ensure that the business of Gang-Nail should be maintained as a separate and viable enterprise and that nothing should be done to prejudice its separate viability or competitiveness.

H H HUNT (*Chairman*)

K S CARMICHAEL

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4 July 1988