OFFICE OF FAIR TRADING

Anticipated acquisition by Spectris plc of Lochard Ltd

The OFT's decision on reference under 33(2)(a) give on 29 January 2009. Full text decision published 16 February 2009.

Please note that square brackets indicate figures or text which have been deleted or replaced at the request of the parties for reasons of commercial confidentiality.

PARTIES

1. Spectris plc (Spectris) is a leading supplier of precision instrumentation and controls for use in, for example, performance management and quality assurance. **Brüel & Kjær Sound & Vibration** (B&K) is a subsidiary of Spectris. Globally, B&K supplies systems for environmental noise management at airports, cities, railways, construction sites, traffic areas, entertainment parks, racing tracks, and mines; and for noise surveys. In the UK, B&K offers environmental noise management systems (ENMS) and handheld noise measurement devices.

2. **Lochard Limited** (Lochard) specialises in the manufacture, supply, service and operation of ENMS, mainly to airports. Lochard also manufactures environmental noise management tools with broader applications, namely combined systems integrating the monitoring of air quality and carbon emissions with noise monitoring. Lochard's total turnover in the UK for its financial year ending 30 June 2008 was [less than £5 million].

TRANSACTION

3. On 11 November 2008 Spectris announced its proposed acquisition of Lochard by a Share Sale and Purchase Deed concluded between Spectris and Lochard on 11 October 2008. The OFT received a satisfactory

submission by the parties on 10 November 2008 and the administrative deadline is 6 February 2009.

JURISDICTION

4. As a result of this transaction Spectris and Lochard will cease to be distinct. The parties overlap in the supply of ENMS to airports in the UK and the share of supply test in section 23 of the Enterprise Act 2002 (the Act) is met as the parties' combined share in the supply of ENMS to airports in the UK exceeds 25 per cent. The OFT therefore believes that it is or may be the case that arrangements are in progress or in contemplation which, if carried into effect, will result in the creation of a relevant merger situation.

MARKET DEFINITION

Product scope

Introduction

5. The parties submitted that the relevant product market is environmental noise management, including the supply and operation of permanent and semi-permanent ENMS and terminals; maintenance contracts for such systems; noise prediction and mapping software and urban noise mapping services; and system hosting and operation services.

Urban ENMS and airport ENMS

6. The parties submitted that the market includes systems provided to monitor noise at both airports and in urban areas since all environmental noise management terminals use similar hardware with a similar set of components (including outdoor microphones) and the majority of software used is the same. According to the parties, the main difference between ENMS for use at airports, and those for urban use, is that airport ENMS includes software which tracks the flight paths of aircraft. The parties claimed that [ ] Moreover, the parties claimed that the same suppliers bid for both urban ENMS and airport ENMS contracts, and that margins for urban ENMS and airport ENMS are similar.

Demand side substitutability

7. From the demand side, it is clear from third party comments that airports do not view urban ENMS to be substitutable with airport ENMS. Specifically, the flight tracking and radar interface with the systems make airport ENMS distinct from urban ENMS.

Supply side substitutability

8. The OFT received conflicting evidence on supply side substitutability. The parties argued that switching from urban to airport ENMS is a very simple and inexpensive process, costing in the region of [less than €500,000]. Conversely, the OFT's market investigation identified a switching cost of around €1.2-1.5m.

9. The parties suggested that approximately [less than a year] would be required to switch to the supply of airport ENMS from urban ENMS. Conversely, competitors also told the OFT that it would take approximately one to two years to develop a system, and would take about five years to recover the costs.

10. The OFT considers that the switching costs identified by competitors may not be entirely accurate as they may be measuring the cost of de novo entry into airport ENMS rather than the cost of switching from urban ENMS. However, the OFT notes that even on the lower switching costs/shorter entry time frame suggested by the parties, it is not clear that there is supply side substitutability from airport ENMS to urban ENMS. This is because what matters from a supply side substitution perspective is whether it is profitable to do so in response to a small but significant non-transitory increase in price (SSNIP) (and not just whether it is technically feasible), and the parties did not provide data for this assessment to be undertaken. In addition, there are a number of qualitative factors which the OFT views as potentially indicating that urban ENMS belongs to a separate market to airport ENMS:

    - Lochard markets itself exclusively as an 'airport' specialist

- prices for urban ENMS and airport ENMS are not the same: airport ENMS are more expensive as additional and more sophisticated equipment is required, and

- a local sales presence appears to be more significant in urban ENMS as, according to the parties, part of the transaction rationale is to utilise B&K's wider global presence in order to expand into urban ENMS.

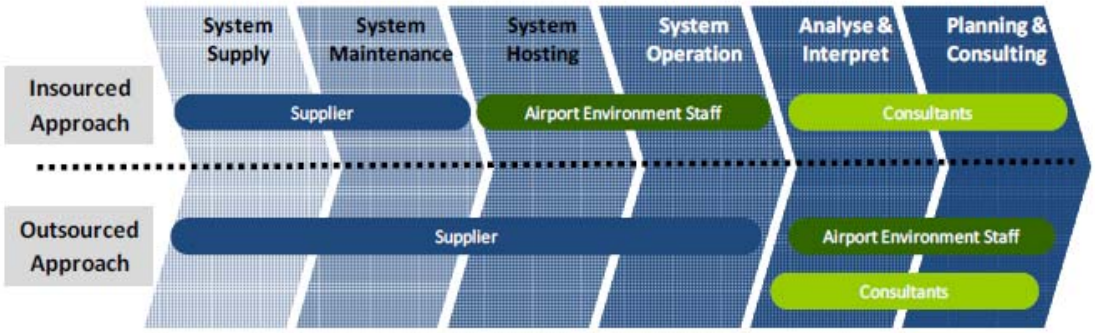
11. To the extent that substitution from airport ENMS to urban ENMS is a relevant consideration, the OFT considers it more appropriate to take this into account in its competitive assessment in the consideration of entry and expansion, rather than in market definition. On a conservative basis, therefore, the OFT does not consider urban and airport ENMS to be substitutable either from a demand- or a supply-side perspective.

After-markets for airport ENMS

12. An after-market is a market for a secondary product, that is, a product which is purchased only as a result of buying a primary product (for example, razors and razor blades). The primary product and the after-market product are complementary: indeed, if they are complementary enough—for instance, such that customers consider the 'whole life' cost of both the primary (razor, say) and after-market (razor blades, say) products when making their purchasing decisions—then it may be appropriate to consider the primary and after-market products as part of the same relevant market. This will depend on (i) whether customers are able to consider the 'whole life cost' (for example, how transparent after-market prices are); (ii) whether customers are likely to consider the 'whole life cost' (for example, how expensive the after-market products are relative to the primary products) and (iii) whether suppliers can price discriminate between customers who consider the 'whole life cost' and those who do not (and how many of each there are).

13. For airport ENMS, Figure 1 shows that there are five plausible after-markets in the supply chain, associated with the primary market of system supply: maintenance, hosting, operation, analysis and interpretation, and planning and consultation. Figure 1 also shows that some of these putative after-markets can be self-supplied in-house by airports, whereas maintenance cannot.

Figure 1: airport ENMS primary and after-markets



Source: Parties

14. The parties submitted that maintenance, hosting and operation should be included in the same relevant market as system supply.

15. Given that the hardware for airport ENMS can be and is supplied separately to the software, the OFT further considered whether there could be separate relevant markets within system supply for 'upstream' hardware and 'downstream' software.

Hardware

16. From an airport's point of view, the primary demand is for a noise management system and this is what they typically tender for. An airport ENMS encompasses the noise monitoring units (hardware), flight trackers (which are linked into radars to monitor where flights are coming from) and software, which processes the input data from the hardware/units and the flight tracking software. The parties submit that none of these inputs are a solution in themselves and this seems to be supported by airports, though one customer said that once a system is in place, more monitoring units could be added, but an airport noise management system needs to be in place for this to happen. The OFT also understands that there are a number of airport ENMS providers that purchase noise monitoring units from hardware providers and write their own software on these in order to create an airport ENMS. This would imply that the hardware required for the provision of airport ENMS could form a separate upstream market.

17. There may therefore be a separate upstream market for hardware, although for the purposes of this decision, it is not necessary for the OFT to conclude on this point.

Maintenance

18. With regard to maintenance, most third party ENMS providers stated that it is either very difficult or impossible to maintain a system installed by another provider, primarily because of the need to understand the software. On the basis of tender documents seen by the OFT, it appears that airports tender for airport ENMS and maintenance together. This indicates that when conducting a 'whole life cost' analysis for the installation of airport ENMS, airports also take into account maintenance costs. In addition, the OFT has not found any evidence of maintenance for a system being performed by another party other than the party that installed the system.

Hosting and operational services

19. The parties have also submitted that hosted/outsourced services (such as for example Lochard's Noise Office) should be considered part of the relevant market.

20. The OFT understands that system hosting and operation (together which we refer to as operational services) is a relatively new service that is provided to airports (mainly by Lochard through its Noise Office). As far as the OFT is aware, in the UK it is only BAA's London airports[1] and [ ] airport that outsource operational services to their airport ENMS provider at present and the OFT understands that these operational services can only be provided by the airport staff or outsourced to the supplier of ENMS. The remaining airports in the UK conduct operational services in-house and have not indicated that they would currently consider outsourcing operational services.

21. The OFT's market investigation has indicated that operational services are not considered by airports or indeed by competitors (such as ERA and Topsonic) to be so complementary to the provision of airport ENMS and maintenance so as to be considered at this point in time as part of the same product market as airport ENMS and maintenance. In fact some airports (such as Luton) indicated that at this point they would not consider outsourcing operational services at all.

Conclusion on product scope

[1] The parties' internal documents indicate that only [ ] out of the [ ] airports that Lochard provides airport ENMS to worldwide currently outsource operational services.

22. On the basis of the above, the OFT considers that the relevant product market in this case is that for the provision of airport ENMS and the associated maintenance of these systems (together which we refer to as ANMS). The OFT does not consider that operational services, at present, form part of the relevant product market, although it does acknowledge that should the outsourcing of operational services become standard practice, the scope of the relevant product market definition could potentially be expanded to include these services in the future.

23. The OFT also considers that hardware may form a separate upstream product market, although it does not need to conclude on this point for the purposes of this decision.

Geographic scope

24. Although airports do not move (so there can be no geographic demand-side substitution), from a supply side perspective the parties submitted that the relevant geographic market for ANMS is global because tenders are requested internationally by the majority of customers on average once every five to ten years. In addition the parties submit that the majority of firms compete globally, with competitors including firms in the US, the UK, Norway, Japan, France and Germany.

25. The OFT's market investigation, however, was not wholly consistent with the existence of a global ANMS market for the following reasons:

    - there are different regulatory requirements in certain countries which may point towards national markets. The parties argued that the European Union Noise Directive (EU Directive 2002/49/EC) which regulates EU noise monitoring, indicates that there are common standards in relation to noise monitoring which point to markets that are wider than national. However, this may not necessarily be the case as the EU Noise Directive directs Member States to implement its requirements using national legislation and to specify their own standards for noise monitoring subject to the Directive's minimum requirements. In the UK in particular, the EU Noise Directive has been implemented through the Environmental Noise Regulations 2006 but the Town and Country Planning Act 1990 also stipulates different (and potentially more stringent) requirements for deciding whether particular airports would need to monitor noise. Airports therefore purchase ANMS in order to

comply with the requirements of the agreements they have entered into under Section 106 of the Town and Country Planning Act, in addition to their obligations under the Environmental Noise Regulations

- the provision of maintenance services to airports indicates to the OFT the need for a degree of local presence. In this respect, the OFT notes that Lochard has an Amsterdam office from which it provides services to its European clients and that the companies bidding for UK airport contracts all appear to be (or have some presence) within some proximity of the UK. Indeed the OFT's market investigation has confirmed that proximity is a factor airports take into account when deciding which ANMS provider to award the tender to

- market participants' national market shares tend to be different in various countries and also differ from the global market shares. The parties have indicated that differences in market shares in different countries arise due to the fact that there are often national champions which would tend to be awarded ANMS contracts by state-owned airport operators (prior to the introduction of the EU procurement rules). Local companies would also be more likely to have a wider presence in their country of origin and build up the network of airports to which they provide ANMS in their country of origin first (as for example Lochard did in Australia), and

- the OFT notes that competitive conditions are not identical in all geographical regions – for example (as mentioned above) in the UK there is no legacy 'national champion' whereas in Germany, Italy and France there are such companies which could exert a much more significant competitive constraint on the merged entity. In addition, competitive conditions in the US appear to be different in that there is another strong active competitor, ERA (which operates on B&K hardware) which has not, so far, been active outside of North America.

26. In light of the above, the OFT's preliminary view is that the geographic market for ANMS could be narrower than global. However, even if the OFT

does view the ANMS market as global, this does not necessarily mean that it views every ANMS provider globally as a credible close competitor to the parties in the UK. The OFT notes, however, that its concerns in relation to this merger arise regardless of whether or not these markets are defined as global, European or national. It is not necessary, therefore, for the purposes of this decision for the OFT to conclude on the scope of the relevant geographic market since the merger gives rise to competition concerns regardless of how the geographic market is defined.

HORIZONTAL ISSUES

Unilateral effects

27. The parties overlap in the supply of ANMS. The parties have provided market share data for the supply of ANMS both in the UK and worldwide on a number of different bases: namely by installed base; by contracts (number and value) won over the past five years; and by revenue. The parties have also provided bidding data and examples of customers switching provider. Given the lumpy nature of this market (meaning short term fluctuations in market shares can be dramatic as large contracts are won and lost) and the relatively small number of contracts involved, the OFT has examined the parties' market shares on all of these different bases.

Market shares by installed base

28. Table 1 illustrates the market shares of the parties and other competitors active in the UK in respect of the installed base of ANMS contracts:

Table 1: market shares by installed base in the UK (2008)

	No. of airport contracts	Share of installed base (per cent)
Lochard	[ ]	[50-60]
B&K	[ ]	[10-20]
Combined	[ ]	[ ]
Topsonic	[ ]	[10-20]
ERA	[ ]	[0-10]
Cirrus	[ ]	[0-10]
Total	[ ]	100

Source: Parties

29. Table 2 illustrates the market shares of the parties and other competitors active globally in respect of the installed based of ANMS contracts:

Table 2: market shares by installed base globally (2007)

	No. of airport contracts	Share of installed base (per cent)
Lochard	[ ]	[50-60]
B&K	[ ]	[10-20]
Combined	[ ]	[ ]
ERA	[ ]	[10-20]
Topsonic	[ ]	[0-10]
Other	[ ]	[0-10]
Total	[ ]	100

Source: Parties

30. In its recent decisions in Northgate/Anite[2] and Capita/IBS,[3] the OFT noted that such 'legacy' shares of the installed base may not accurately represent the dynamics of competition in markets ostensibly similar to ANMS. The OFT noted in those cases that once a contract has been awarded, the opportunity for further competition in relation to that customer is very limited until the contract (or part of the contract) is put out to tender again. Indeed, the parties have submitted only one example of switching before the contract was put to tender. Consequently, the OFT has therefore also examined the parties' shares of supply in ANMS contracts in the UK and globally (by value and by number of contracts won) over the last five years (five years being towards the shorter end of the time period for which contracts appear to be tendered).

Market shares by value of contracts won in past five years

31. Shares of supply based on the value of new contracts won per annum since 2004 in the UK are set out in Table 3 below:

Table 3: Total UK ANMS sales (by value)

	Year									
	2004		**2005**		**2006**		**2007**		**Total**	
Vendor	**€**	**per cent**	**€**	**per cent**	**€**	**per cent**	**€**	**per cent**	**€**	**per cent**
Lochard	[ ]	[90-100]	[ ]	[50-60]	[ ]	[90-100]	[ ]	[20-30]	[ ]	[70-80]
B&K	[ ]	[0-10]	[ ]	[40-50]	[ ]	[0-10]	[ ]	[0-10]	[ ]	[10-20]
Combined	**[ ]**	**[ ]**	[ ]	**[ ]**	[ ]	**[ ]**	[ ]	[ ]	[ ]	**[ ]**
Topsonic	[ ]	[0-10]	[ ]	[0-10]	[ ]	[0-10]	[ ]	[70-80]	[ ]	[10-20]
Total	**[ ]**		[ ]		[ ]		[ ]		[ ]	

Source: Parties. Note that there were no UK ANMS sales in 2008.

32. Shares of supply based on the number of new contracts won per annum since 2004 globally are set out in Table 4 below.

[2] ME/3795/08
[3] ME/3841/08

Table 4: Total Global ANMS sales (by value)

	Year											
	2004		2005		2006		2007		2008		Total	
Vendor	€	per cent	€	per cent	€	per cent	€	per cent	€	per cent	€	per cent
Lochard	[ ]	[60-70]	[ ]	[30-40]	[ ]	[50-60]	[ ]	[10-20]	[ ]	[50-60]	[ ]	[40-50]
B&K	[ ]	[10-20]	[ ]	[40-50]	[ ]	[10-20]	[ ]	[0-10]	[ ]	[0-10]	[ ]	[20-30]
Combined	[ ]	**[ ]**	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
ERA	[ ]	[20-30]	[ ]	[10-20]	[ ]	[10-20]	[ ]	[30-40]	[ ]	[10-20]	[ ]	[10-20]
Topsonic	[ ]	[0-10]	[ ]	[0-10]	[ ]	[10-20]	[ ]	[20-30]	[ ]	[20-30]	[ ]	[10-20]
BridgeNet	[ ]	[0-10]	[ ]	[0-10]	[ ]	[0-10]	[ ]	[0-10]	[ ]	[0-10]	[ ]	[0-10]
Megadata	[ ]	[0-10]	[ ]	[0-10]	[ ]	[0-10]	[ ]	[0-10]	[ ]	[0-10]	[ ]	[0-10]
SofTech	[ ]	[0-10]	[ ]	[0-10]	[ ]	[0-10]	[ ]	[10-20]	[ ]	[0-10]	[ ]	[0-10]
Atech	[ ]	[0-10]	[ ]	[0-10]	[ ]	[0-10]	[ ]	[0-10]	[ ]	[0-10]	[ ]	[0-10]
Total	[ ]		[ ]		[ ]		[ ]		[ ]		[ ]	

Source: Parties

Market shares by number of contracts won in past five years

33. Shares of supply based on the number of contracts won per annum since 2004 in the UK are set out in Table 5 below:

Table 5: UK ANMS Tender sales

Vendor	Year										Total	
	2004		2005		2006		2007		2008			
	No	per cent	No	per cent	No	per cent	No	per cent	No	per cent	No	per cent
Lochard	[ ]	[90-100]	[ ]	[0-10]	[ ]	[]	[ ]	[30-40]	[ ]	[ ]	[ ]	[40-50]
B&K	[ ]	[0-10]	[ ]	[90-100]	[ ]	[ ]	[ ]	[0-10]	[ ]	[ ]	[ ]	[10-20]
Combined	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
Topsonic	[ ]	[0-10]	[ ]	[0-10]	[ ]	[ ]	[ ]	[60-70]	[ ]	[ ]	[ ]	[40-50]
Total	[ ]		[ ]		[ ]	[ ]	[ ]		[ ]	[ ]	[ ]	

Source: Parties

34. Shares of supply based on the number of contracts won per annum since 2004 globally are set out in Table 6 below:

Table 6: Global ANMS Tender sales

Vendor	Year										Total	
	2004		2005		2006		2007		2008			
	No	per cent	No	per cent	No	per cent	No	per cent	No	per cent	No	per cent
Lochard	[ ]	[30-40]	[ ]	[40-50]	[ ]	[50-60]	[ ]	[20-30]	[ ]	[40-50]	[ ]	[30-40]
B&K	[ ]	[20-30]	[ ]	[30-40]	[ ]	[20-30]	[ ]	[10-20]	[ ]	[10-20]	[ ]	[20-30]
Combined	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
ERA	[ ]	[30-40]	[ ]	[10-20]	[ ]	[0-10]	[ ]	[20-30]	[ ]	[30-40]	[ ]	[20-30]
Topsonic	[ ]	[0-10]	[ ]	[0-10]	[ ]	[10-20]	[ ]	[20-30]	[ ]	[20-30]	[ ]	[10-20]
BridgeNet	[ ]	[0-10]	[ ]	[0-10]	[ ]	[0-10]	[ ]	[0-10]	[ ]	[0-10]	[ ]	[0-10]
Megadata	[ ]	[0-10]	[ ]	[0-10]	[ ]	[0-10]	[ ]	[0-10]	[ ]	[0-10]	[ ]	[0-10]
Total	[ ]		[ ]		[ ]		[ ]		[ ]		[ ]	

Source: Parties

35. The data shows that both on a UK basis and on a global basis the parties have been consistently successful in winning contracts over the past five years with Lochard winning on average [70-80] per cent of the contracts by value in the UK and [40-50] per cent globally and B&K winning [10-20] per cent in the UK and [20-30] per cent globally. Whichever basis is used, the combined market share of Lochard and B&K both in the UK and globally is at least [60-70] per cent.

36. In addition, when considering the data by number of contracts, Lochard on average won [40-50] per cent of the contracts in the UK and [30-40] per cent of contracts globally. B&K won [10-20] per cent of contracts in the UK and [20-30] per cent globally. Whichever basis is used, the combined market share of Lochard and B&K is [50-60] per cent.

37. The OFT further considers that this data could indicate a strong degree of incumbency advantage as the parties' share of contracts awarded over the past five years is consistent with their shares of the 'legacy' installed base of ANMS contracts.

Market shares by revenue

38. The parties have submitted that the value of tenders won in any year does not correlate with revenues in that year,[4] and have provided their revenues for 2007 with a market size estimate. Table 7 shows the parties' estimates of UK ANMS revenues market share, alongside the OFT's estimates.

Table 7: UK ANMS revenues

	ANMS	
	Parties' estimates	**OFT estimates**
UK		
Market size (£)	[ ]	[ ]
Lochard share (per cent)	[30-40]	[70-80]
B&K share (per cent)	[0-10]	[10-20]
Combined Share (per cent)	[ ]	[ ]

Source: Parties

[4] This is because of the differences in revenue streams under ANMS contracts for Lochard and B&K.

39. The OFT notes that there is significant divergence between the parties estimates of their market shares and the OFT's estimates. The OFT believes, however, that its estimates more accurately capture the dynamics of competition than do the parties' estimates since the parties have only taken into account 2007 revenue in order to calculate the above market shares. Given the lumpy size of the market, we believe that taking into account 2007 revenue only does not provide an accurate estimate of the competitive landscape. The OFT therefore arrived at its estimate of market size by taking the original total system costs at each airport, dividing those by six (six years being the average life of the system), and adding annual maintenance costs.[5]

40. The OFT used the above methodology to estimate Lochard and B&K's revenue over the life of the system and notes that the market shares at which it arrives with its calculation are broadly consistent with the market shares for value of sales over the past five years (see Table 3 above) which is to be expected over a longer term.

Bidding data

41. The parties have also provided bidding data in the UK from 2003. The data indicates who the bidders were for each contract and the winner of each. The data are reproduced in Table 8.

Table 8: UK bidding 2003 to 2007

Year	Airport Name	Winner	Other known Bidders	Incumbent
2007	[ ]	[ ]	[ ]	[ ]
2007	[ ]	[ ]	[ ]	[ ]
2007	[ ]	[ ]	[ ]	[ ]
2006	[ ]	[ ]	[ ]	[ ]
2005	[ ]	[ ]	[ ]	[ ]
2004	[ ]	[ ]	[ ]	[ ]
2003	[ ]	[ ]	[ ]	[ ]

Source: Parties

[5] For the airports where ANMS are provided by Lochard or B&K, the OFT used actual maintenance figures provided by the parties. The remaining maintenance figures are estimates according to airport size, assuming that maintenance was 10 per cent of the original system.

42. Table 8 suggests that: (i) Lochard and B&K bid against each other in the vast majority of cases; (ii) one of the two parties was successful on the majority ([over 50] per cent) of occasions when the parties tendered (Lochard winning [ ] contracts and B&K [ ], out of a total of seven contracts in the last five years); (iii) during the past five years only one other company, Topsonic, has been successful in winning a bid for an airport; and (iv) other market participants mentioned by the parties such as Cirrus and BAe do not appear to be active competitors (see below section on other competitors).

43. This is consistent with the OFT's market investigation: most third parties have suggested that airports consider Lochard and B&K to be each other's closest competitors. In addition, Lochard's internal documents also consistently name B&K as its closest competitor and B&K's internal documents name Lochard as its only competitor in ANMS.

44. The parties argued that B&K has not been winning contracts in the UK recently due to weaknesses in its software. With the exception of Robin Hood airport in Doncaster (which is essentially an extension of the Liverpool airport contract), B&K did not win a tender between 2003 and 2008. However, the OFT believes that B&K has nevertheless been exercising at least some competitive constraint on Lochard just by bidding against it (even if it did not subsequently win the contract). In addition, B&K has recently been winning contracts internationally in sizeable airports such as Beijing, Moscow and Valencia, and therefore the OFT considers that Lochard would still regard it as a credible competitor.

45. However, the OFT is also mindful of the fact that Topsonic has emerged as Lochard's strongest competitor in the UK over the past three years. In particular, Topsonic was the successful bidder in two of the three tenders in 2007.

46. In addition, the parties' product strengths may be complementary, as B&K is understood to have good hardware (but is not as strong a competitor on software) whereas Lochard's strength is its software. This view was reflected in comments received from BAA who, in contrast to most market participants, indicated that the parties were not each other's closest competitors due to the poor quality of the B&K software.

Tendering process

47. The OFT understands that the Public Contracts Regulations 2006, which enact the EU Public Procurement Directives, apply to the tendering by airports of ANMS contracts exceeding approximately £140,000: airports are obliged to tender ANMS contract exceeding this value (which many do) to at least three bidders. This could help to maintain competition and arguably to facilitate entry, to the extent that airports will need to locate at least one additional bidder (given the merged firm and Topsonic appear likely to be bidding, on the basis of past bidding data).

Remaining competitors

48. Post-merger, Topsonic will be the only significant competitor to the merged firm in the UK currently. Topsonic is a German company with a particularly strong presence in that country, and has been operating in the UK since 2003. The OFT notes that Topsonic has been a particularly aggressive competitor to Lochard and B&K in the UK over the past five years. Topsonic bid in all tenders since 2003 (see Table 8 above) and, as noted above, was the successful bidder in two of the three bids in 2007.

49. The OFT's market investigation has indicated that Cirrus is a small competitor and may not necessarily be an effective competitor against Lochard/B&K in respect of larger airports.

50. The parties submit that there are a number of potential ANMS suppliers who are capable of competing with the parties effectively in the UK. These are discussed in the barriers to entry section below.

Switching

51. Given the initial upfront cost of installing ANMS, the OFT has considered whether airports would switch easily between ANMS providers or whether there is a strong incumbency advantage. The parties have submitted some evidence of switching globally, which is summarised in Table 9.[6]

[6] The OFT notes that the parties have provided data since 1993 but only considers switching examples from the past five years as relevant as the market players do not appear to be the same.

Table 9: Global switching examples 2003-2008

Date	Country	Airport	Original	New	Procurement
2008	USA	[ ]	[ ]	[ ]	Public Tender
2007	Germany	[ ]	[ ]	[ ]	Private Offer
2007	Italy	[ ]	[ ]	[ ]	Private Offer
2007	Switzerland	[ ]	[ ]	[ ]	Public Tender
2005	UK	[ ]	[ ]	[ ]	Public Tender
2005	Switzerland	[ ]	[ ]	[ ]	Public Tender
2005	USA	[ ]	[ ]	[ ]	Public Tender
2005	Lithuania	[ ]	[ ]	[ ]	Public Tender
2004	Spain	[ ]	[ ]	[ ]	Public Tender
2004	Taiwan	[ ]	[ ]	[ ]	Public Tender
2003	UK	[ ]	[ ]	[ ]	Private Offer

Source: Parties

52. While the above examples show that switching has occurred, they do not necessarily indicate that switching is common or easy in the ANMS market: given the parties' submission that 58 contracts[7] have been tendered over the past five years worldwide, the 11 examples of switching in Table 9 (of which only nine are relevant since some of these instances show switching from players that no longer appear to be active in the market (that is, Flood, TII)) do not contradict other evidence of a strong incumbency advantage in bidding for ANMS contracts. In addition, there is only one relevant example of switching in the UK (the one other example, as noted above, involving a player no longer in the market).

53. The OFT notes that switching costs for an airport could, depending on the incumbent hardware they have installed, be relatively high. For instance, Lochard's hardware does not interoperate with other software (although Lochard's software can operate on other hardware) so for a firm to switch from a Lochard system to that of another supplier can be far more costly as the airport would inevitably need to purchase new hardware.[8] However,

[7] This number does not include private offers which potentially may have been made to airports but which were rejected.
[8] This is reflected in Lochard internal documents which state that [ ]

the OFT is also aware of the example of Luton airport, in particular, where there was a switch from Lochard to Topsonic systems, where Topsonic was able to provide a competitive service (both in terms of price and quality) to Luton regardless of the cost of installation of a new ANMS.

Prima facie unilateral effects concerns

54. Overall, on the basis of the evidence received, the OFT considers that Lochard and B&K have a consistently large share of contestable and legacy ANMS and are close competitors. While the OFT notes the relatively strong position of Topsonic, the proposed merger nevertheless results in a reduction in the leading providers of ANMS in the UK from three to two (and four to three globally), which is sufficient to raise prima facie concerns.

55. The OFT has therefore considered whether there are any countervailing factors, such as low barriers to entry or buyer power, that would be sufficient to alleviate any concerns arising from the merger.

Entry is insufficient to constrain the merged firm

56. The parties submitted that barriers to entry are low, there have been several examples of actual entry, and there are a number of potential entrants into the market.

57. For the reasons discussed below, while the OFT considers that some of the parties' arguments on entry appear plausible, the OFT did not receive sufficient evidence during its market investigation to be confident that entry would be timely, likely and sufficient to offset its prima facie competition concerns.

Entry from urban ENMS

58. The parties have argued that providers of urban ENMS can enter ANMS with relative ease. As discussed above (in the market definition section) the parties argued that the cost of entry into ANMS from urban noise management is relatively small (approximately [less than €500,000]) and that entry time was approximately one to three months. Both Lochard and B&K entered ANMS from urban ENMS and argued that this is a simple and relatively inexpensive process. The OFT's market investigation identified a significantly higher switching cost and longer entry time although the OFT considers that this might be explained due to the fact that these higher

costs and longer lead times related to de novo entry as opposed entry from urban into airport ENMS.

59. Notwithstanding this uncertainty regarding the exact cost and timing of entry, the OFT's market investigation has to some extent confirmed the parties' views that entry into ANMS from urban noise management is not particularly difficult. Outside the UK, the OFT is aware that companies such as 01db and Rion have, to some extent,[9] entered ANMS via urban noise management. In addition, the OFT understands that Larson Davis, a hardware provider of noise management systems who used to be present in ANMS is considering re-entering the market. However, none of these parties indicated to the OFT that they had any intentions to start competing for business in the UK in the foreseeable future.[10]

60. In addition, given (a) the relative value of the investment required (even on the basis of the parties' estimates) compared to the small size of the ANMS market (see below); and (b) the fact that reputation and evidence of expertise are important factors that airports take into account when tendering,[11] the OFT is not convinced that potential entry into ANMS by urban noise management operators would necessarily be likely or sufficient to alleviate any concerns arising from the merger.

Entry from ANMS providers currently active outside the UK

61. The parties argued that there are a number of ANMS providers currently operating outside the UK that could be credible bidders for ANMS in the UK.

62. In particular, the parties pointed to ERA, who is a strong competitor of Lochard in North America. Until recently, B&K was an exclusive supplier of hardware to ERA [ ]. The OFT understands that this exclusive agreement is no longer in place.

63. Although ERA currently provides ANMS to Edinburgh and Glasgow airports these are historical contracts from the period when ERA's ANMS business

[9] The OFT is aware of 01db and Rion providing ANMS to [ ] airports in France and [ ] airports in Japan respectively.
[10] The OFT is aware that 01db bid for one tender in the UK in 2002.
[11] The OFT is aware that BAA airports operate with Larson Davis hardware and Lochard software. While this may indicate that Larson Davis does have some standing in the UK at present, the OFT is not convinced that this is the case since the equipment in question is old and Larson Davis has not been active in ANMS for five years.

was owned by BAe systems. Since its acquisition of the BAe systems business in 2006, ERA has not, according to the parties' data and as confirmed by ERA itself, competed for ANMS in the UK, and was not named by customers as a prospective competitor to the parties.[12] It is for this reason that the OFT has not considered ERA as an active competitor in the UK at present.

64. However, ERA informed the OFT that it is intending to bid for contracts in the UK in the near future although it could not indicate a specific timeline for any such activity. If ERA were to enter the UK, and if it were able to replicate the level of success that it enjoys in North America, it would clearly provide an important constraint on the merged entity. The OFT has, however, certain reservations about ERA's ability to compete effectively in the UK, at least in the short-term. First, ERA currently uses B&K hardware for the systems that it supplies in North America. If ERA were to supply the same systems in the UK, the OFT would have concerns over its ability to act independently of, and therefore compete against, B&K. Second, if ERA were to switch hardware supplier (see discussion on vertical effects below), the OFT would have concerns over its ability to compete effectively against the merged firm, in particular in the short-term. Given the importance of reputation, it is not clear how airports would react to a product offering from ERA, notwithstanding its North American position, using a new and potentially untested hardware supplier. In this regard, ERA told the OFT that it would take up to three years for it to be able to enjoy the same success with new hardware as with its current supplier.

65. The parties have also made particular reference to Softech and Nittobo as firms who could bid in the UK. Other firms internationally active in ANMS include 01db (primarily in France), Larson Davis (an American firm that does not have independent software capabilities), HMMH (who used to own the ANOMS system currently run by Lochard), Passur/Megadata and Rion (a small Japanese firm).

66. The OFT is mindful of the fact that in a bidding process, firms can exert a level of competitive constraint by entering the bidding process (that is, without having to win the tender). Moreover, the OFT considers that the

[12] The OFT is aware that ERA also currently provides a separate type of service - multilateration and other environmental solutions - to at least one airport in the UK (East Midlands). Multilateration is the process of locating an object by accurately computing the time difference of arrival of a signal emitted from the object to three or more receivers.

'three bidder rule' (discussed above) could have the effect of promoting entry into the UK.

67. Conversely, while the ANMS providers cited by the parties are active to some extent globally (either as ANMS providers in their own right, or suppliers of hardware or software for ANMS), the OFT notes that reputation, evidence of expertise and geographic proximity are relevant considerations that airports take into account when selecting a provider, and most customers had only limited awareness of these providers, if any. In addition, other than ERA, none of them indicated to the OFT that they had any intention to enter the UK in the foreseeable future. On balance, therefore, while the parties' arguments on entry would appear plausible, the OFT did not receive sufficient evidence during its investigation to be able to conclude that entry would be timely, likely and sufficient to alleviate the OFT's concerns in this case.

Buyer power is insufficient to discipline the merged firm

68. The parties supply ANMS to large and small airports and airport groups. The parties argued that some customers, like BAA, have market power due to the size of their airports and the number of airports they represent. However, given the fact that (a) airports of a certain size have a statutory duty to enter into noise monitoring agreements, (b) seller (that is, ANMS providers) concentration is higher than buyer (that is, airports) concentration and (c) airports will want to enter into an agreement with an ANMS supplier that is established and reputable (this latter point being even more relevant for larger airports), the OFT does not consider that buyer power will be sufficient in this case to countervail the potential anticompetitive effects of this merger. In addition, not all airports will have buyer power (given that some of these are quite small), and there is no indication that even if some (larger) customers were able to constrain the merged firm that this would protect other (smaller) customers.

Conclusion on unilateral effects

69. The OFT does not consider that the prospect of entry or countervailing buyer power are sufficient to offset its prima facie unilateral concerns. In particular, the OFT considers that the merged firm could have the ability and incentive to raise prices (or reduce them less than would have been necessary without the merger) or to reduce quality (in relation to the actual product and maintenance contracts) and investment, as a result of the loss of competition between Lochard and B&K. On this basis, the OFT considers that there is a realistic prospect of a substantial lessening of competition as a result of the proposed merger.

Coordinated effects

70. Mergers in markets such as ANMS where the process of competitive interaction is characterised by tendering and bidding may be subject to coordinated effects as the bidding process itself may increase transparency and because repeated interactions in terms of contract tenders may offer a credible punishment mechanism. Conversely, collusion is less likely to occur in markets such as ANMS where outcomes are 'winner takes all', and where contract interactions are lumpy (that is, irregular, infrequent and of greatly varying value) and irreversible (that is, once a contract is awarded, there is no further competition for that customer).

71. The OFT considers that there are three cumulative conditions that must all be met for a merger to create or strengthen coordinated effects: (i) firms need to be able to reach and monitor the terms of coordination; (ii) coordination must be internally sustainable; and (iii) coordination must be externally sustainable. Further, for coordinated behaviour to take place as a result of a merger, the merger must strengthen pre-existing coordination or make coordination more likely.

Reaching and monitoring the terms of coordination

72. For coordinated behaviour to take place there needs to be a high degree of transparency in the market. The OFT considers that reaching and monitoring the terms of coordination is therefore consequently easier when:

    - the market is sufficiently concentrated such that firms recognize their interdependence

- the terms of market transactions (for example, price) are clear to market participants
- there is stability of underlying costs (when costs vary, it may be difficult to determine whether a change in price or some other coordinated variable represents a deviation from coordination or a response to changes in costs), and
- there is stability of demand (when demand varies, it may be difficult to determine whether a change in price or some other coordinated variable represents a deviation from coordination or a response to changes in demand).

Concentration

73. The OFT notes that the ANMS market appears concentrated enough for the few competitors to recognise their mutual interdependence. In fact some competitors have commented that the merger would be beneficial for them since there would be one less competitor for them to have to 'beat' in a tendering process.

Terms of market transactions

74. The winner of each tender is easily observable and the repeated bidding process may make the terms of transactions clear and therefore increase transparency, though this depends upon how similar subsequent tenders are. The evidence in Tables 3 to 6 indicates that individual contracts vary greatly in value, which tends to suggest that the terms of the last contract (to the extent that they are observable) need not be good predictors of the terms of future contracts.

75. Similarly, given the bespoke nature and the technical complexity of ANMS tenders, any coordinated effects may need to encompass multiple parameters other than price, which generally militates against coordination.

Stability of costs and demand

76. For coordination to take place, the OFT considers that there must be stability of firms' profit incentives—that is, stability of costs and demand. Stability of market shares can be a good proxy for this. As discussed above, the parties' shares of the installed base of contracts appear to have been relatively stable for some time.

77. Further the OFT's market investigation suggests that demand is relatively stable as the number of airports around the world requiring ANMS is also relatively stable: any growth in the aviation industry has been broadly offset by a reduction in demand for ANMS as a result of aircraft becoming quieter. On the other hand, any potential expansion into operational services could lead to future market growth and points against the existence of a stable market.

Conclusion

78. The OFT considers that although the ANMS market does exhibit some characteristics which could lead to the conclusion that co-ordination in this market could be reached, on balance, it appears unlikely that this market would be prone to co-ordination.

Internal sustainability

79. For coordinated behaviour to persist, firms must have sufficient incentives not to deviate from the coordinated outcome. In this regard, the repeated interactions between ANMS providers in the context of bidding for contracts may provide them with the ability to detect cheating and a credible mechanism to punish cheating when detected. Further, firms tender for contracts globally and such multi-market contact can facilitate coordination by permitting punishment in other geographic markets for deviation in one.

80. Set against this, however, the OFT notes that coordination does not generally tend to be internally sustainable with such significant asymmetry in market shares. Further, coordination is not internally sustainable where contracts are lumpy and irreversible. These factors indicate, therefore, that providers' incentives to coordinate are not well aligned.

External sustainability

81. For coordinated behaviour to take place, there must be insufficient constraints to prevent it. Principal amongst these are barriers to entry and buyer power (discussed above), which were not deemed sufficient to alleviate any unilateral competition concerns.

Effect of the merger

82. The OFT received no evidence of pre-existing coordination in ANMS. Further, the evidence did not suggest that the merger might make coordination more likely.

83. In particular, the merger increases the asymmetry in market shares—which, as discussed above, may reduce transparency over stability of costs and demand. The parties submit that the merger will enable them to 'provide stronger standard solutions to customers'. We considered whether this might reduce the degree of differentiation of the product, possibly increasing transparency over costs. The parties told us, however, that ANMS is a bespoke and technically complex product and the observation that such specialised technical complexity would be built on a more standardized 'base' solution post-merger said nothing about the observability of costs.

Conclusion on coordinated effects

84. On the basis of the evidence before it, the OFT does not consider that there is a realistic prospect of the merger creating or strengthening coordinated effects. In particular, two of the three necessary conditions for coordination (reaching and monitoring the terms of coordination; and internal sustainability) are not realistically met on an individual basis. That is, for both of these conditions, the OFT considers that the arguments against it being met are not weaker than those for it being met. This necessarily greatly reduces the chances of all three conditions realistically being met simultaneously, as the OFT's reference test would require. Further, the OFT received no evidence that the merger made it more likely that any or all of these conditions would realistically be met.

NON HORIZONTAL ISSUES

85. During the OFT's market investigation, certain third parties had raised concerns in relation to the non-horizontal effects of the proposed merger. The OFT has therefore also examined the vertical effects of this merger.

Input foreclosure

86. As mentioned above, ERA is currently Lochard's key competitor in North America, where it uses B&K hardware. ERA has not yet entered Europe (aside from its two historical contracts in Glasgow and Edinburgh) although

it says that it now intends to do so. B&K did not compete in North America prior to the merger with Lochard.[13]

87. ERA raised a concern that it would be forced to continue to deal with B&K post merger, in order to maintain the hardware that is already installed in airports, despite the fact that it would now be directly competing with B&K. The concern is essentially that increases in hardware maintenance charges by B&K could make ERA a less effective competitor to the merged entity in the future. Since ERA has not been actively competing for new business in the UK after its acquisition of BAe, this concern is currently more relevant in North America, but could become relevant in the UK if ERA were to attempt to enter using B&K hardware.

88. ERA's concern relates to input foreclosure. Input foreclosure arises when the merged firm with market power raises the costs of its non-vertically-integrated downstream rivals by restricting their access to an important input, or by increasing the cost to them of that input. An 'important' input is one that, if foreclosed, would adversely affect the competitiveness of the merged firm's rivals in the downstream market. Input foreclosure is only anticompetitive if it adversely affects competition in the downstream market as a whole, rather than merely adversely affecting one or a few downstream competitors of the merged firm. Increasing the price or otherwise worsening the terms of access to the important input (for example, reducing interoperability or quality) to its downstream rivals may result in the merged firm partially foreclosing them (that is, raising their costs). Refusing access to the important input to its downstream rivals may result in the merged firm totally foreclosing them (that is, forcing them to exit).

89. In assessing the likelihood of input foreclosure, the OFT will look at the merged firm's ability to foreclose access to inputs, the merged firm's incentive to do so, and whether a foreclosure strategy would have a significant detrimental effect on competition downstream. These conditions are cumulative and interrelated.

[13] B&K is not independently active in the US currently due to additional software requirements for airport noise management systems which it is unable to provide. [ ]

Ability to substantially foreclose access to environmental noise management hardware

90. Anticompetitive input foreclosure will generally be more likely where the merged firm has significant market power and where it concerns an important input for ANMS.

91. The OFT did not reach a conclusion as to whether 'upstream' hardware might realistically constitute a separate relevant market. Nonetheless, Lochard's hardware is not interoperable with third party software so its 'upstream' production is captive to its own 'downstream' ANMS. Given that B&K therefore supplies itself and ERA (at least), its share of the residual 'merchant' hardware market appears sufficient to confer market power.

92. The OFT further understands that B&K hardware is of very high quality and that B&K is a leader in providing environmental noise management hardware, meaning B&K hardware is an important input to ANMS. As discussed above, the OFT understands that B&K has arrangements with ERA (which were, until recently, exclusive) to provide it with hardware. Further, a supplier's reputation is an important factor taken into account by airports when tendering.

93. Consequently, B&K appears to have the ability to partially foreclose competition in the downstream ANMS market by (a) increasing the maintenance costs of its hardware, (b) raising the purchase price of its hardware and (c) providing hardware to downstream competitors which would be of reduced quality in comparison to that used by the merged entity.

94. However, the ability of B&K to do this appears unaffected by the merger, given Lochard's hardware production is 'captive' to its own ANMS, and the OFT did not receive any evidence that B&K had previously done so.

Incentive to foreclose

95. The parties submit that they will continue to supply hardware to any company that requires it at competitive prices because the rationale for the merger was potential expansion into different environmental markets by combining the quality of B&K's hardware with Lochard's strength in software and not the entrenchment of their position in ANMS which does

not contribute significantly to B&K's revenue (B&K internal documents approving the transaction support this proposition).

96. Nonetheless, the OFT considers that a merged firm's incentive to engage in input foreclosure depends on whether input foreclosure is profit maximising. Overall, this depends on the trade off between the profit lost by the merged firm in hardware (because it sells less to its downstream ANMS rivals) and the profit gained by the merged firm in ANMS, because business diverts to the merged firm from the rivals whose costs it has raised (and who have raised their ANMS prices accordingly).

97. Generally, the OFT expects profit margins on software to be higher than profit margins on hardware, given the production of software is dominated by the fixed costs of its development and the incremental cost of producing an extra 'unit' of software essentially is zero. The OFT received no evidence that this was not the case for the software component of ANMS.

98. Given its acquisition of Lochard's substantial 'downstream' market share in ANMS, it appears plausible that B&K now has greater incentive to partially foreclose its hardware in order to raise its ANMS rival's costs and gain any (profitable) diversion given its greater post-merger presence in ANMS.

99. In practice, this risk of partial foreclosure is only likely to be significant for ERA, given its historical reliance on B&K software, and ERA is not currently an ANMS competitor in the UK. If ERA were to attempt to enter the UK on the basis of its existing systems, which employ B&K hardware, the OFT considers that B&K may have an incentive to raise input prices. This in turn could compromise ERA's ability to act independently, and therefore compete effectively against, the merged party. However, this point has already been discussed above under barriers to entry.

Overall impact on competition

100. In any case, ERA informed the OFT that it could source its hardware from alternative suppliers, and in fact that it has already found an alternative supplier that can provide it with such hardware. If ERA were to switch hardware supplier, and enter the UK on this basis, then there would be no residual concerns relating to B&K's incentive to engage in input foreclosure. The OFT recognises that it may take time for ERA to regain its

former market positioning and reputation on this basis. This point again has already been discussed above under barriers to entry.

101. In conclusion, the OFT considers that B&K may have the incentive to engage in input foreclosure, but that this will not affect any current players in the market, but only the potential for entry by ERA, and as such has already been taken into account in the competitive assessment above.

102. It should also be highlighted that a merger combining ANMS hardware and software suppliers may provide substantial scope for efficiencies leading to lower prices/better non-price offers to ANMS customers: indeed, the OFT tends to view such vertical relations as presumptively benign at worst and often pro-competitive for just these reasons.[14] Third parties have also indicated that the merger could result in a better product offering by the merged entity (see further Third Party Views below) and the parties' internal documents indicate that the merger will enable them to 'provide stronger standard solutions to customers'.[15]

Conclusion on input foreclosure

103. On balance, on the basis of the evidence before it, the OFT considers that the merged firm may have the ability and incentive to foreclose ANMS competitors, but that this is unlikely to affect any competitors currently active in the UK. To the extent that it may affect potential entrants into the UK, any impact of such potential input foreclosure has already been discussed within the analysis of barriers to entry.

THIRD PARTY VIEWS

104. Customers contacted by the OFT were not generally concerned about the proposed merger as they (a) viewed Topsonic as a major competitor to the parties and (b) thought that the merger could potentially result in an improved service offering. Customers did voice some concern in respect of the reduced choice they would be facing in the future and potential reduced quality of service but did not raise strong objections to the merger.

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[14] See, for example, *Anticipated joint venture between Goodrich Corporation and Rolls-Royce plc*, OFT decision ME/3875/08 of 8 December 2008.

[15] The parties have indicated that they will be able to develop software 'platforms' which will, in fact, enable them to provide customised solutions at a much cheaper price rather than imposing a common standard for all their services.

105. Competitors raised some concerns about the impact of the merger on their own position in the market as they thought that the merged entity would potentially be able to offer a product of much higher quality due to the complementary strengths of Lochard in software and B&K in hardware. Other competitors pointed out the high market shares of the parties and the difficulty in entering the market, especially with the merging parties' market shares. Some competitors also indicated that the merger could even be beneficial for them in that it would reduce the competitors during the tendering process.

106. One competitor (ERA) was concerned about the future supply of hardware units and hardware maintenance and the incentives of the parties post merger to increase prices to those they supply with hardware.

ASSESSMENT

107. The merger combines the two largest providers of ANMS in the UK and globally.

108. For the purposes of its assessment, the OFT analysed the merger on the basis of ANMS forming a distinct product market to urban environmental noise management.

109. In the UK, the merger will effectively result in a reduction of competitors from three to two with the parties having a combined market share of at least 60 per cent. The parties appear to be close competitors (both from their internal documents and from customer submissions) and the data seen by the OFT indicates that they both bid for all tenders in the UK since 2003. While B&K has not been winning tenders recently, the OFT considers that it has nevertheless continued to impose an important competitive constraint on Lochard.

110. The OFT is not convinced that potential entry either from competitors active outside the UK, such as ERA, 01db or Softech, or from companies active in the urban environmental noise management sector will be timely, likely or sufficient to alleviate its unilateral effects concerns.

111. The OFT concluded, on the basis of the evidence before it, that the merger would not create or strengthen coordinated effects as two of the three necessary conditions for coordination (reaching and monitoring the terms of coordination; and internal sustainability) are not realistically met on an individual basis.

112. The OFT also had concerns in relation to the non-horizontal aspects of this merger, in that B&K currently provides hardware to ERA, which is a potential entrant into the UK ANMS segment. On the basis of the evidence before it, the OFT considers that the merged firm may have the ability and incentive to foreclose ANMS competitors. However, this is unlikely to affect any current players in the market, but only the potential for entry by ERA, and as such has already been factored into the conclusion that the prospects for entry are not sufficient to alleviate the unilateral effects concerns.

113. Consequently, the OFT believes that it is or may be the case that the merger may be expected to result in a substantial lessening of competition within a market or markets in the United Kingdom.

EXCEPTIONS TO THE DUTY TO REFER

Introduction

114. The OFT's duty to refer under section 33(1) is subject to the application of certain discretionary exceptions, including the markets of insufficient importance, or 'de minimis', exception under section 33(2)(a) and the undertakings in lieu exception under section 73(2) of the Act. The parties argued that the OFT should apply the 'de minimis' exception to the duty to refer[16] on the basis that the value of the ANMS market in the UK is less than £1 million per annum.[17]

Undertakings in lieu of reference and 'de minimis'

115. For the reasons explained in full in the OFT's Dunfermline Press/Trinity Mirror decision,[18] the OFT believes that it would be proportionate to refer a problematic merger (that is, not to apply the 'de minimis' exception) where the OFT considers that it is 'in principle' clearly open to the party (or parties) to offer a clear-cut undertaking in lieu of reference – but they have in fact chosen not to do so – because the recurring benefits of avoiding

[16] See OFT 516 b, November 2007.
[17] The parties submitted that the value of the ANMS market was £[less than £1 million] in 2008 and would be £[less than £1million] in 2011.
[18] OFT Decision *Completed acquisition by Dunfermline Press Limited of the Berkshire regional newspapers business from Trinity Mirror plc* 4 February 2008.

consumer harm by means of undertakings in lieu in a given case, and all future like cases, outweighs the one-off costs of a reference.

116. The OFT did not consider, based on its objective evaluation of the transaction, that this case was a clear candidate for resolution by means of undertakings in lieu. In particular, there would be expected to be links between each of the parties' design and technology of ANMS with their other ENMS activities such that it is not obvious that a clear-cut structural remedy of the overlapping ANMS business would be open to the parties if the transaction goes ahead. The OFT therefore considers that it would not be appropriate to rule out the application of the 'de minimis' exception at this stage of the analysis.

Application of the markets of insufficient importance exception to this case

117. The factors that the OFT considers in determining whether it should apply its discretion in respect of the 'de minimis' exception have been set out in detail in a number of recent cases.[19] The relevant factors are:

- market size
- strength of the OFT's concern (ie its judgment as to the probability of the substantial lessening of competition occurring)
- magnitude of competition lost by the merger
- durability of the merger's impact, and
- transaction rationale and the value of deterrence.

118. The OFT has considered each of the above factors in determining whether to exercise its discretion in this case.

119. Market size – The OFT considers that the proposed acquisition creates a realistic prospect of a substantial lessening of competition in the ANMS market. The OFT has estimated that the current annual market size for ANMS (including only systems and maintenance, consistent with the OFT's market definition) is [less than £1 million] (by taking into account revenues over the last five years[20]).

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[19] See for example OFT Decision *Anticipated acquisition By BOC Limited of the Packaged Chlorine Business and Assets carried on by Ineos Chlor Limited* 29 May 2008 and, most recently, OFT Decision *Completed acquisition by Capita Group plc of IBS OpenSystems plc* 19 November 2008.

[20] As a general statement, in lumpy markets, the OFT considers it artificial to consider the value of contracts for one particular year only as the appropriate figure, as this may grossly inflate or

120. As indicated in the OFT's guidance,[21] the OFT considers that, when considering market size for these purposes, it should not view the market statically, but should take into account any factors which indicate that the market size may be significantly expanding in the future.

121. The parties have submitted (and the OFT's market investigation has confirmed this) that the ANMS market (in terms of systems and maintenance) is not growing, in that there is a finite number of airports throughout the world which require ANMS services, and, despite the growth in passenger numbers, aircraft are becoming quieter therefore reducing the need for noise monitoring rather than increasing it.

122. The OFT also considered whether it should take account of the possibility that the ANMS market (currently comprising of airport noise management systems and maintenance services) could expand to encompass operational services in the near future (in line with the parties' submission on market definition). The imminent extension of the market in this way is of relevance to whether the market concerned is of insufficient importance to justify a reference.

123. The OFT's market investigation has shown conflicting views as to whether the ANMS market will in fact expand to include operational services (which are currently provided by airports in-house). On the one hand, BAA currently outsources these services to Lochard in respect of its London airports (which are the largest in the UK) and Topsonic provides these services to [ ] (which is a very small airport). Luton airport, on the other hand, indicated that it would not consider outsourcing operational services as it had doubts as to whether this function could indeed be effectively outsourced. Topsonic itself indicated that larger airports need to retain the environmental noise management function in-house to demonstrate their commitment to noise control. However, Topsonic also noted that, since ANMS providers can provide operational services much more cost efficiently than airports themselves, it may be that the function does end up being outsourced. Given these conflicting views, the OFT has not been able to conclude with any certainty whether ANMS will, over the next few years, also expand to include hosting and operational services, but considers that such an extension of the market is certainly possible.

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underestimate the true annual value of the overall market. In such circumstances, the OFT is likely to err on the side of caution in determining the annual size of the market.

[21] See OFT 516 b, November 2007, paragraph 7.6.

124. The OFT has proceeded cautiously by including within the size of the affected market the current value of the operations that are outsourced.[22] This would bring the current value of ANMS (including current hosting and operation) to [less than £2 million].[23]

125. ERA indicated to the OFT that the hosting and operation segment was expanding in the US at a growth rate of ten per cent. Given that there was some scepticism amongst customers in the UK in respect of the market growing in this direction, the OFT has, again, on a cautious basis, taken ten per cent as a reasonable maximum estimate. On the basis of this growth rate, the value of the ANMS market (if one were to include hosting and operation) is likely to remain below £2 million within the next few years.

126. By way of conclusion, then, the current annual value of the market in the UK on the basis of the OFT's market definition is [less than £1 million]; if one were to include within an expanded market the current value of operational services that are outsourced, and allow for the growth potential in that area, the size of the extended market that would be potentially affected by the merger would remain below £2 million.[24] Even on this higher (and admittedly cautious) basis, this would mean that the size of the affected market is very small. Nevertheless, the size of the market is more than negligible so it is appropriate to consider the additional 'de minimis' factors in detail.

127. Strength of the OFT's concerns – The OFT's belief that the transaction may be expected to result in a substantial lessening of competition is on the balance of probabilities (that is, over 50 per cent likely, or at the 'is the case' standard in the wording of section 33 of the Act). As a result, the strength of the OFT's belief that harm will result from the merger, although

[22] Although the OFT considered that it should at present examine the effect of the merger on the basis of a separate economic market for the supply of ANMS (systems and maintenance), this does not mean that those particular customers seeking hosting and operation as part of the supply of ANMS (systems and maintenance) would not be impacted by a substantial lessening of competition caused by the merger.

[23] The precise value depends on how much value, if any, is attributed to the services Topsonic provides to [ ] airport, which the OFT understands is very small.

[24] The OFT acknowledges that it has not found a realistic prospect of a substantial lessening of competition in respect of stand-alone hosting and operation activities. However, the impact of any substantial lessening of competition in the supply of ANMS services could be expected also to extend to hosting and operations activities if these were linked with supply of systems and maintenance in a single extended ANMS market.

not in itself conclusive, tends to point away from the exercise of the 'de minimis' exception in this case.

128. Magnitude of competition lost by the merger – the merger causes a reduction in the number of ANMS providers from three to two major suppliers in the UK and four to three major suppliers globally. This suggests that the magnitude of competition lost by the merger will be significant and so this factor, on its own, weighs in favour of not exercising the 'de minimis' discretion.

129. Durability of the merger's impact – the OFT notes that entry into ANMS is possible either through the urban segment or through aviation software specialists, that the entry costs submitted by the parties from these segments are not very high ([less than €500,000]) and that entry time is [less than one year]. Weighed against this, the OFT notes that costs of de novo entry appear to be much higher (in the region of €1.2 - €1.5 million according to competitors) and requires a much longer time frame (one to two years). Also, the fact that this market is small in size makes entry less profitable even if the investment required is relatively small. However, the OFT notes that (a) there has been some entry from related sectors over the past years and this is not a static sector, ie there has been entry into and exit out of this sector; (b) companies already active in related sectors (such as urban environmental noise management or aviation software) are more likely to enter ANMS; and (c) should ANMS expand to include hosting and operational services entry would appear to be more attractive given the enlarged scale of the market. The OFT also considers that the 'three bidder rule' may enhance competitive conditions in the market since airports in the UK will need to seek additional competitors, (ie other than the merged entity and Topsonic) to bid for UK ANMS contracts. Indeed ERA has told the OFT that it is planning to bid in the UK in the near future and the OFT considers that it could be a credible entrant given (a) its position in North America and (b) the fact that it will be able to compete without using B&K hardware in the future as it is already in discussions with another hardware provider. The OFT therefore expects that the duration of any harm arising from this transaction will be evident for only a limited time as there is likely to be some entry in the next three years (the OFT acknowledges that entry time depends on contracts coming up for tender).

130. Transaction rationale and value of deterrence – Spectris stated that the rationale for the transaction was not the acquisition of market power

through the removal of Lochard. Rather, the parties' rationale for the transaction was potential expansion into different environmental markets by combining the quality of B&K's hardware with Lochard's strength in software. The B&K internal documents approving the transaction support this proposition. In addition, the lack of concerns by third parties in relation to the transaction indicate that this is not a case where a high deterrence multiplier should be applied. Considering the overall circumstances of the current case, the OFT considers that it would not be appropriate to consider deterrence a particularly significant aggravating factor in this decision for the purposes of its 'de minimis' assessment.

131. Overall, the OFT considers that the evidence points towards the impact of the merger being relatively limited in time. In particular, the current size of the market at [less than £1 million] is well below the £10 million threshold (and would still be small even if extended to include current and potential future hosting and operation services), and the scale of anti-competitive effects is likely to be limited due to entry by ANMS providers currently operating outside the UK or entry from related sectors such as urban environmental noise management.

DECISION

132. This merger will therefore not be referred to the Competition Commission pursuant to section 33(2)(a) of the Act.