

Mobile radio network services

Summary of Provisional Decision

14 October 2022

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The Competition and Markets Authority has excluded from this published version of the report information which the inquiry group considers should be excluded having regard to the three considerations set out in section 244 of the Enterprise Act 2002 (specified information: considerations relevant to disclosure). The omissions are indicated by []. Some numbers have been replaced by a range. These are shown in square brackets.

Summary

Background

1. Being able to communicate effectively in the field with each other, with staff at base and with other organisations involved in tackling an emergency, is critical for emergency services staff. It is essential for them to do their job and to protect the safety of the general public and that of the emergency services.
2. To meet those needs, the emergency services require communication network services that are reliable 24 hours a day, 365 days a year; that enable them to communicate across regional boundaries and organisations; that provide coverage even in remote and hard to reach locations; and that include specialist features such as high speed call set up, emergency buttons, encryption, group calls and ambient listening.
3. In Great Britain, those communication services are provided through a bespoke integrated network called the Airwave Network. It uses Land Mobile Radio (LMR) technology developed specifically for public safety and is fully dedicated to serving the emergency services and other organisations which need to communicate with them.
4. The Airwave Network's users belong to one of five customer groups, each with its own specific set of requirements. They are: 44 police forces; 50 fire and rescue services; 14 ambulance trusts; the National Police Air Services; and 165 other organisations (described as 'Sharer' organisations), such as the Maritime and Coastguard Agency, who need to communicate with the emergency services in emergencies.
5. The Airwave Network was set up and operates under a Public Finance Initiative (PFI) Agreement made with the Police Information Technology Organisation (subsequently replaced by Home Office) in 2000 following a public procurement exercise. That agreement was originally set to end after 19 years, around 2019. Services are provided under the terms of separate agreements that were entered into with individual emergency services user groups in subsequent years. The network is owned and operated by Airwave Solutions (which was acquired by Motorola in 2016).
6. As a bespoke integrated network fully dedicated to emergency services communications covering the whole of Great Britain, the Airwave Network is operated by a single supplier. No alternative network providing similar services exists.
7. In 2014/15, the Home Office conducted a further procurement exercise for the provision of a new network to replace the Airwave Network, called the Emergency

Services Network (ESN). That replacement was originally intended to be implemented in or around 2020, but it has not yet taken place.

Our market investigation

8. Market investigations are about whether competition is working effectively in the market as a whole.¹ Even where, as in this case, there is a single monopoly supplier and a single entity (the Home Office) representing a group of buyers, the focus is on the functioning of the market, not just the conduct of particular firms or participants within it.
9. The aim of an investigation is to examine whether there is a competition problem caused by features of the market and, if so, to remedy them and/or their detrimental effects. We can intervene and impose remedies even where no specific law has been broken if we identify anti-competitive features in a market. That does not mean that firms or market participants have acted unlawfully.²
10. In this case, we have provisionally identified the relevant market as the supply of communications network services for public safety and ancillary services in Great Britain. We refer to it in this provisional decision report as the market for ‘the supply of communications network services for public safety.’
11. We have considered how competition can occur in that market. The decision to build a bespoke integrated network of the kind required meant that a single supplier would be best placed to meet the emergency services’ needs under long term contracts. Those contracts included a PFI Agreement and, under them, the large upfront investment required to build the network could be recouped, and an estimated rate of return earned, by the supplier over the life of the contracts.
12. An important source of competitive constraints on suppliers in this market,³ therefore, is ‘competition for the market’. It can occur when long term contracts are first tendered and when they expire (or, more specifically, in anticipation of their expiry when a replacement network is competed for).
13. In a well-functioning market, we would expect one set of competitive arrangements to be replaced by another when such long term contracts come to an end. That could, for example, be the replacement of the existing arrangements by:

¹ [Guidelines for market investigations: Their role, procedures, assessment and remedies \(CC3 \(Revised\)\)](#), paragraph 18.

² CC3 (Revised), paragraph 21.

³ But not the only one – see section 3 of this provisional decision report.

- (a) a competitively priced continuation of the operation of the existing network infrastructure (for example, under a retendering process facilitated by the transfer of the assets to the Home Office, or the threat of such a process); or
- (b) a competitively priced new network (for example, one tendered under a new process), that could use new technology and offer enhanced functionality.

14. We have therefore assessed whether this has occurred and, if not, why not.

Our provisional assessment

15. In our provisional assessment, the terms of the PFI Agreement under which the Airwave Network is provided resulted from a process – tendering under public procurement rules – that can broadly be characterised as competition for the market. It appears to us that, in relation to the original period of the PFI Agreement, the Home Office had the opportunity to run an open competition for a supplier and, as a result, to agree terms that constrained the price of the provision of the network.⁴ In such a competition, the winning supplier would reasonably have been expected to set the price at a level that would enable it to cover its expected costs and earn a reasonable return for the period of the contract.
16. The PFI Agreement⁵ that resulted from the original procurement exercise was for a fixed term ending in 2019.⁶ It provided for a contract price designed to recoup the supplier's investment and offer it the possibility of an estimated rate of return over that period, but not beyond. It contained provisions which sought to deal with the end of the contract and the transfer of assets to the Home Office (or a third party), with no terms relating to contemplating its extension.
17. The relevant provisions therefore appear to us to be consistent with terms we might expect to find in a well-functioning market up to 2019. They were consistent with the possibility of, for example, either a retendering process at that point, after the transfer of the network assets to the Home Office, or the replacement of the existing network in 2019/20 with a competitively procured and priced new one offering enhanced functions (and the latter is what the Home Office sought to achieve through the procurement exercise it conducted in 2014/15 for the provision of ESN).
18. The position now that the original period of the PFI Agreement has ended, however, is, in our provisional view, materially different. Our provisional assessment is that the terms on which the Airwave Network is provided after 2019 are better characterised as reflecting a virtually unconstrained monopoly position

⁴ Although, as described in Appendix B, there were some limitations on the extent of the competition that applied and the National Audit Office reported on these.

⁵ And associated service contracts.

⁶ Once all related contract end dates were aligned.

on the supplier's part rather than the result of a competitive process. Prices are established through bilateral negotiations between Airwave Solutions and its owner, Motorola (the monopoly supplier), and the Home Office (acting on behalf of all emergency services). In those negotiations the Home Office has no meaningful alternative option in terms of its choice of supplier.

19. We think it is significant that the terms on which the network is supplied, particularly the price, have not materially changed as we would expect in a competitive market to reflect that: (i) the original fixed period of the PFI Agreement has ended; and (ii) the incremental cost of providing the Airwave Network will have fallen significantly compared with the previous period where the supplier had to incur the substantial set-up costs of building the network.⁷ This is despite:
- (a) The original terms of the PFI Agreement not contemplating their continued application after 2019;
 - (b) the expectation that the supplier's capital expenditure associated with the provision of the network and services to the end of 2019 should have been fully accounted for in its successful bid for the original contract; and
 - (c) the risk borne by the supplier being much reduced after 2019 because the network is built and is operating as a reliable income stream.
20. In other words, the terms of the PFI Agreement do not appear reliably to constrain the price at which the Airwave Network is provided after 2019, and do not result in a price or a level of profitability that would be expected in a well-functioning market. This is reflected in the generation of supernormal profits after the original period of the contract.⁸
21. Key reasons for the present position, in our provisional assessment, are that:
- (a) The contractual provisions put in place under the PFI Agreement to enable competition for the provision of services using the underlying infrastructure at the end of the original fixed period of that agreement have not resulted in the transfer of network assets to the Home Office and Airwave Solutions continues to own them; and
 - (b) the fact that the government's chosen replacement for the Airwave Network, ESN, is taking considerably longer to implement than was contemplated: (i) when it was procured; and (ii) in 2016 when Motorola and the Home Office

⁷ This remains the case [§<] (see section 4 of this provisional decision report in particular).

⁸ Supernormal profits are profits which take into account all costs including a market-based return to the providers of capital on their investment. They are also called economic profits. Very broadly, these are the element of profits over and above the normal amount we might expect to be made in a well-functioning market.

negotiated terms that relate to the provision of the Airwave Network after 2019.

22. As a result, the Home Office and the emergency services in Great Britain appear to be 'locked in' with a monopoly provider, Airwave Solutions, well beyond the duration originally set under the PFI Agreement. They have no other choice but to use the Airwave Network for their key communications needs in critical situations, and are likely to be in that position until at least 2026 and possibly for a period beyond.
23. Our provisional view is that Airwave Solutions and its owner, Motorola, now have considerable market power in this market. The available evidence indicates that in the negotiations between Airwave Solutions and the Home Office relating to the continued provision of the Airwave Network beyond 2019, the Home Office is in a particularly weak bargaining position. That weakness results primarily from the absence of any alternative option at the Home Office's disposal for as long as ESN is not operational.
24. Other factors, in our provisional assessment, reinforce Airwave Solutions' and Motorola's market power and the weakness of the Home Office's bargaining position:
 - (a) The criticality of the service provided and concerns about the impact of any service disruption on the emergency services;
 - (b) the likely ineffectiveness of the original contractual provisions relating to benchmarking (and the lack of reliable comparators that make any benchmarking exercise practically very difficult (if possible at all)); and
 - (c) the asymmetry of information between the parties.
25. The first additional factor means that the Home Office and emergency services are dependent on the continued provision of the network, without disruption or degradation. The risks to public safety in the event of reduced or discontinuous network service are so serious that this is likely to limit very substantially the Home Office's ability to challenge the terms Airwave Solutions / Motorola propose.
26. The other two affect the Home Office's ability to assess and challenge the profitability and reasonableness of any price offer Airwave Solutions / Motorola make. As a result, in our provisional assessment, not only does the Home Office lack bargaining power in the negotiations, but it is unable to determine reliably whether Airwave Solutions is charging (or seeking to charge) prices that result in supernormal returns.
27. Two further issues relating to Airwave Solutions' and Motorola's roles in the delivery of ESN and the transition to it from the Airwave Network are also relevant.

Our provisional assessment is that these add to the competitive distortions in the market.

28. The first of those further issues is Motorola's dual role as both one of the key suppliers involved in the roll-out of ESN and, from 2016, the owner of Airwave Solutions. It has controlled both the Airwave Network (the current network) and key aspects of the delivery of ESN (the replacement network) since 2016 and continues to do so.⁹ Our provisional view is that Motorola's dual role gives it both the incentive and the ability to delay the delivery of ESN and to prolong the highly profitable monopoly position of Airwave Solutions.¹⁰
29. Our analysis is that the profits Motorola derives from the Airwave Network significantly outweigh any profits it can expect to derive from the delivery of its ESN obligations, directly or indirectly. As such, it can, in our provisional assessment, be expected to dull its incentive to deliver those obligations in a timely and efficient manner. Motorola's central role in delivering ESN also appears to us to enable it to delay the delivery and to prolong its position in relation to the Airwave Network. Some of the outcomes we can observe relating to the delivery of ESN – especially those delaying its replacement of the Airwave Network – are consistent with the actions of a supplier having the incentives and ability we have identified.
30. The second of the further issues that adds to the competitive distortions (in our provisional view) is that during the period (estimated to be at least 27 months) in which the transition between them will gradually occur, the Airwave Network and ESN will need to be linked.¹¹ This will occur through 'interworking', which will support communications between users as they switch networks at different times. The current interworking solution that Airwave Solutions / Motorola have developed involves proprietary interfaces and the Home Office has indicated that it is contemplating changes to ESN which would require the development of an alternative interworking solution.
31. The development of any such alternative interworking solution appears to rely on Airwave Solutions', and potentially Motorola's, active cooperation. Consequently, in our provisional assessment, they have an ability to delay, hamper and/or make more costly the development of any such solution and the transition process, if they choose. The competition issues described in paragraphs 12 to 22 above in particular, and the related high profits they can generate if the transition from the

⁹ [§<]

¹⁰ Which accounted for 7-8% of Motorola's global revenue but between 21 and 26% of its global pre-tax profits in 2018, 2019 and 2020.

¹¹ Because of the critical nature of network communication services for public safety and the length of the transition period.

Airwave Network is delayed, may dull their incentives effectively and efficiently to deliver an alternative solution.¹²

32. Taking all of the above points into account, it appears to us that the current situation, in which charges for Airwave Solutions' provision of LMR network services for public safety are not subject to meaningful constraints, is the result of a market that is not functioning well.

Adverse effect on competition (AEC) in the relevant market

33. Based on our analysis, we provisionally find that features of the market for the supply of communications network services for public safety, individually or in combination, prevent, restrict or distort competition in connection with the supply of LMR network services for public safety in Great Britain. There is, in our provisional view, an AEC in that market.
34. Our provisional assessment is that the following features mean Airwave Solutions, and its owner, Motorola, have unilateral market power and are able, as described further below, to charge prices above the level we might expect in a competitive market and to make supernormal profits:
- (a) The Airwave Network is a critical piece of infrastructure on which the emergency services in Great Britain, and ultimately lives, depend.
 - (b) The Airwave Network is the only network of its kind in Great Britain and is provided by a monopolist. No other such networks exist nor are they likely to be constructed and ready for use before ESN is able to replace it.
 - (c) The Airwave Network assets have not transferred to the Home Office under the terms of the PFI Agreement, Airwave Solutions still owns them (and the related business) and the Home Office cannot retender or realistically threaten to retender their provision.
 - (d) The longer than anticipated lead time for the delivery of ESN and its replacement of the Airwave Network: it will not be ready to replace the Airwave Network until at least 2026 and possibly later.
 - (e) The Home Office and the emergency services in Great Britain are locked in with the incumbent supplier of communications network services – Airwave Solutions (and Motorola) – beyond the period over which its prices were, or should have been, constrained by the terms of the PFI Agreement (and Airwave Solutions should have recouped its investment and a reasonable return).

¹² [X]

- (f) The Home Office has very weak bargaining power.
 - (g) The asymmetry of information between the parties.
 - (h) The lack of effective constraints provided by the terms of the PFI Agreement on the price of the provision of the network after 2019, including the benchmarking provisions which are likely to be ineffective.
35. Two further features strengthen and have the potential to prolong the unilateral market power described above:
- (a) The dual role of Motorola which dulls its incentive to perform its part in the delivery of ESN effectively and efficiently, and which gives it the ability to prolong the operation of the Airwave Network by delaying the delivery of ESN.
 - (b) The role of interworking in strengthening Airwave Solutions' and Motorola's market power, by enabling them to delay, hamper and/or make more costly the transition of users from the Airwave Network to ESN.
36. In our provisional assessment, these two additional features add to the AEC we have provisionally found but they are not determinative of it. We would be minded to find an AEC even in the absence of these two additional features.

Customer detriment and remedies

37. Our provisional estimate is that the AEC we are minded to find means that Airwave Solutions, and Motorola, can be expected to make total supernormal profits from the operation of the Airwave Network of around £1.1 billion between 1 January 2020 and 31 December 2026. That is the element of profit over and above the amount we might expect them to make in a well-functioning market. If the delivery of ESN takes longer, our estimate is that they could be expected to make around another £160 million of such supernormal profits each year after 2026. Supernormal profits Airwave Solutions and Motorola would be able to generate by making interworking more costly would be additional to this.
38. We are minded to regard these supernormal profits as a reflection of Airwave Solutions' and Motorola's ability to set prices very substantially above the competitive level such that the Home Office and the emergency services in Great Britain are paying a much higher price than they should for provision of the relevant services.
39. The supernormal profits are, in our provisional view, a reasonable measure of the transfer of welfare from the emergency services, and the taxpayers who fund them, to Motorola shareholders that can be expected to result from the AEC we

have provisionally identified. They indicate that a significant detrimental effect on customers results from that AEC.

40. We have considered the remedies that are effective and proportionate to address our concerns about Airwave Solutions' and Motorola's unilateral market power. Our preference in market investigations is normally to seek to identify remedies that address or remove the features giving rise to the AEC.¹³ In this case, however, our provisional view is that such remedies are limited where a number of the features of the market, such as the criticality of the Airwave Network and its provision by a single supplier, and the Home Office's dependence on it until ESN (or any alternative network) is ready, will continue to exist.
41. Our main remedy proposals therefore focus on mitigating the detrimental effects of the AEC we provisionally identify. To do that, we propose to impose:
 - (a) A charge control on the price for which Airwave Solutions provides the Airwave Network and services; and
 - (b) obligations on Airwave Solutions and Motorola to deliver, and/or facilitate the development and delivery of, an alternative interworking solution in a timely and effective manner, and to provide the services involved in doing so on a cost-plus basis.
42. We also propose to make a recommendation to the Home Office that would supplement those remedies. It should, as soon as possible, implement a plan to ensure that the supply of communications network services for public safety in Great Britain is subject to competitive pricing arrangements, or measures to similar effect, by not later than the end of 2029.
43. The charge control relating to the Airwave Network and services would set the price at a level that would apply in a competitive market. That would, in our provisional view, mitigate the detrimental effects on customers (the emergency services and ultimately taxpayers) from Airwave Solutions' and Motorola's unilateral market power. To the extent they would no longer be earning supernormal profits, that would also reduce Motorola's incentive to delay the delivery of ESN and thereby prolong the operation of the Airwave Network.
44. The charge control would commence in 2023. It would be subject to a review in 2026 that may result in its continuation, variation or removal, and, subject to that review, it would continue until 31 December 2029.
45. The obligations as to the delivery of any new interworking solution Airwave Solutions and Motorola are required to provide (or assist a third party in providing) would relate, for example, to the extent of the action they must take and its timing.

¹³ CC3 (Revised), paragraph 330.

Those obligations would address the ability and incentive to hamper the transition between networks that we provisionally find results from the position on interworking. Requiring Airwave Solutions and Motorola to provide the services required on a cost-plus basis would prevent them charging a price above a competitive level and constrain their ability to generate additional supernormal profits.

46. The plan that we propose the Home Office put in place should ensure that, after the period that would be covered by measures imposed by the CMA as a result of this investigation, the supply of communications network services for public safety is subject to competitive pricing arrangements or alternative measures that result in price levels that would be expected in a competitive market. That could involve, for example, one or more of the following:
- (a) A new network offering enhanced functionality replacing the Airwave Network;
 - (b) a competitive process that may result in changes to the ownership and operation of the Airwave Network and/or its assets taking place; or
 - (c) putting in place a regulatory function to safeguard against the risk of anti-competitive outcomes resulting from a continuing monopoly position in the provision of all or part of the Airwave Network beyond 2029.
47. The Home Office's plan should direct appropriate focus and resources to the ESN programme (or any alternative programme) and seek to ensure that the replacement network or other arrangements operate on competitive terms and in competitive circumstances (or to equivalent effect). Doing so would address the market feature relating to the delayed provision of ESN in particular and those relating to the Home Office's dependence on the Airwave Network and its provision by Airwave Solutions / Motorola.