

# Hytera-Sepura

A report to the Secretary of  
State for Business, Energy and  
Industrial Strategy on the  
anticipated acquisition by Hytera  
Communications Corporation  
Limited of Sepura PLC

4 May 2017

© Crown copyright 2017

You may reuse this information (not including logos) free of charge in any format or medium, under the terms of the Open Government Licence.

To view this licence, visit [www.nationalarchives.gov.uk/doc/open-government-licence/](http://www.nationalarchives.gov.uk/doc/open-government-licence/) or write to the Information Policy Team, The National Archives, Kew, London TW9 4DU, or email: [psi@nationalarchives.gsi.gov.uk](mailto:psi@nationalarchives.gsi.gov.uk).

The Competition and Markets Authority has excluded from this published version of the provisional findings 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 [REDACTED]. [Non-sensitive wording is also indicated in square brackets.]

## CONTENTS

	<i>Page</i>
EXECUTIVE SUMMARY.....	5
Competition assessment.....	5
Public interest .....	5
Remedies.....	6
LEGAL FRAMEWORK.....	6
PARTIES AND TRANSACTION.....	7
INDUSTRY BACKGROUND .....	8
FRAME OF REFERENCE.....	11
Product scope.....	11
Geographic scope.....	12
COMPETITIVE ASSESSMENT .....	12
Counterfactual.....	12
Market shares .....	13
Theory of Harm - horizontal unilateral effects .....	14
ToH 1 - The supply of Airwave-TETRA devices .....	14
Closeness of competition .....	15
Existing stock of Airwave-TETRA devices .....	15
Demand for new Airwave-TETRA devices.....	16
Conclusion on ToH 1 – horizontal unilateral effects in the supply of Airwave-TETRA devices .....	17
ToH 2 - The supply of non-Airwave TETRA devices .....	17
Conclusion on ToH 2 - horizontal unilateral effects in the distribution of non-Airwave TETRA devices .....	18
ToH 3 – The future supply of dual-mode and/or single-mode radio devices on LTE networks .....	19
Dual-mode radio devices for use on the ESN .....	19
Dual-mode radio devices for use on non-ESN LTE networks .....	19
Single-mode radio devices for use on the ESN.....	20
Single-mode radio devices for use on non-ESN LTE networks.....	21
Conclusion on ToH 3 - the future supply of dual-mode and/or single-mode radio devices on LTE networks.....	21
Conclusion .....	22
PUBLIC INTEREST CONSIDERATION.....	22
Summary of interested parties .....	22
The Home Office .....	22
Other third parties.....	23
Home Office advice on third party representations and national security matters .....	24
Remedies – undertakings in lieu.....	24
CMA’s advice to the Secretary of State on the form of Public Interest Undertakings .....	24
ASSESSMENT AND ADVICE TO THE SECRETARY OF STATE .....	26

## EXECUTIVE SUMMARY

1. This report is hereby given in response to the public interest intervention notice (the **Notice**) given to the Competition and Markets Authority (CMA) by the Secretary of State on 10 April 2017, in exercise of his powers under section 42(2) of the Enterprise Act 2002 (the **Act**).
2. The Notice relates to the proposed acquisition by an indirectly, wholly-owned subsidiary of Hytera Communications Corporation Limited (**Hytera**) of the entire issued share capital of Sepura plc (**Sapura**).
3. The Notice required the CMA to investigate and report by midnight on Thursday 4 May 2017.

### Competition assessment

4. As required by sections 44(3)(a) and 44(4) of the Act, the CMA:
  - (a) 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;
  - (b) does not believe that it is or may be case that the creation of that merger situation may be expected to result in a substantial lessening of competition within a market or markets in the United Kingdom for goods or services.
5. In view of its conclusions in (a) and (b) above, it has not been necessary to assess whether any of the exceptions to the duty to refer or undertakings in lieu of a reference apply in this case.
6. Accordingly, the CMA advises that it believes a relevant merger situation would be created but that the test for reference is not met on competition grounds.

### Public interest

7. As required by section 44(3)(b) of the Act, the CMA has summarised representations received about the case which relate to the national security public interest consideration mentioned in the Notice.
8. The Home Office has brought together its views and those of several other UK defence and security services (together **the Home Office**) in relation to the public interest consideration identified in the Notice. In its representations,

the Home Office identified national security concerns arising as a result of this merger.

9. Two third parties also sent representations directly to the CMA, one of which raised concerns in relation to the national security public interest consideration.

## **Remedies**

10. The Secretary of State may either make a reference for a Phase 2 assessment on public interest grounds<sup>1</sup> or accept undertakings in lieu of such reference<sup>2</sup> if he believes that it is or may be the case that the national security concerns the Home Office has identified may be expected to operate against the public interest.
11. The CMA understands that the Home Office is discussing with the Parties possible remedies to address those national security concerns. The remedies address issues related to the protection of sensitive information and technology and the maintenance of UK capabilities in manufacturing, servicing and maintaining Airwave-accredited devices used by emergency services and other agencies.
12. The CMA is not expert in national security matters and therefore, in Phase 1, it only summarises the representations made to it. Nonetheless, the CMA has given advice on features which might, in general, strengthen the effectiveness of any suitable remedies.

## **LEGAL FRAMEWORK**

13. In relation to anticipated mergers, the CMA is required to make a reference for a Phase 2 assessment where it believes that it is or may be the case that the creation of a relevant merger situation may be expected to result in a substantial lessening of competition (SLC) within any market or markets in the United Kingdom for goods or services (section 33(1) of the Act).
14. The Act permits intervention by the Secretary of State in cases where he or she believes that it is or may be the case that one or more than one public

---

<sup>1</sup> Section 45 of the Act.

<sup>2</sup> Schedule 7 paragraph 3(2) of the Act.

interest consideration is relevant to a consideration of the relevant merger concerned<sup>3</sup>.

15. In such a case section 33(1) does not apply<sup>4</sup> and instead the CMA is required to give a report to the Secretary of State within such period as he or she may require<sup>5</sup>. The report must contain:
  - (a) advice on the considerations relevant to the making of a reference under section 22 or 33 which are also relevant to the Secretary of State's decision as to whether to make a reference under section 45; and
  - (b) a summary of any representations about the case which have been received by the CMA and which relate to any public interest consideration mentioned in the intervention notice concerned (other than a media public interest consideration) and which is or may be relevant to the Secretary of State's decision as to whether to make a reference under section 45.
16. In particular, the report must include<sup>6</sup> decisions as to whether the CMA believes that it is or may be the case that:
  - (a) a relevant merger situation has been created or arrangements are in progress or in contemplation which, if carried into effect, will result in the creation of a relevant merger situation;
  - (b) the creation of that situation has resulted or may be expected to result in a substantial lessening of competition within any market or markets within the United Kingdom for goods and services.
17. Following receipt of the CMA's report, the Secretary of State may, pursuant to section 45 of the Act make a Phase 2 reference to the CMA on public interest grounds. In deciding whether to make such a reference, the Secretary of State is required to accept the CMA's decision on the matters listed in paragraph 16 above<sup>7</sup>.

## **PARTIES AND TRANSACTION**

18. Hytera is a Chinese-based global manufacturer and supplier of Professional Mobile Radio (**PMR**) communications systems and solutions to public sector

---

<sup>3</sup> Section 42(2) of the Act. As to public interest mergers more generally, see Chapter 16, [Mergers: Guidance on the CMA's jurisdiction and procedure](#) (CMA2), January 2014.

<sup>4</sup> Section 33(3)(d) of the Act.

<sup>5</sup> Section 44(2) of the Act.

<sup>6</sup> The full list of requirements is set out in sections 44(3) and 44(4) of the Act.

<sup>7</sup> Section 46(2) of the Act.

and commercial customers.<sup>8</sup> Its products include analogue and digital systems that comply with different technical standards. These include Digital Mobile Radio (DMR), Police Digital Trunking and Terrestrial Trunked Radio (TETRA).<sup>9</sup> Its worldwide turnover in 2015 was £[REDACTED] million, of which £[REDACTED] million was generated in the UK.

19. Sepura is a UK-based global supplier of PMR systems and solutions. It designs, develops and supplies digital radios and related products for public sector and commercial customers. It focuses on users of the TETRA technology. Sepura's focus in the UK is the supply of TETRA devices for use on Airwave.<sup>10</sup> Its 2016 worldwide turnover was £[REDACTED] million, including UK turnover of approximately [REDACTED] million.
20. Sepura and Hytera together are referred to as **the Parties** in this report.
21. On 16 December 2016, Sepura's board recommended that its shareholders accept the public offer made by Hytera for the entire issued capital of Sepura (the **Transaction**). As a result of the Transaction:
  - (a) Hytera will acquire full control of Sepura and the enterprises of Hytera and Sepura will cease to be distinct at a time or in the circumstances falling within section 24 of the Act; and
  - (b) the Parties will supply more than a quarter of TETRA radio devices which are supplied in the UK. The Parties' share of supply in 2015 was around [REDACTED] % (including an increment of [REDACTED] %).<sup>11</sup>
22. Accordingly the CMA 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 for the purposes of section 44(4)(a) of the Act.

## INDUSTRY BACKGROUND

23. The Parties manufacture and supply PMR systems and solutions to public sector and commercial customers. PMR systems encompass closed wireless radio communication systems meeting the needs of users with particular security requirements. The features of PMR systems distinguish them from open networks (such as public cellular networks) and include:

---

<sup>8</sup> See paragraphs 23 and *ff.* below for Industry background.

<sup>9</sup> See Industry background section below for more detail.

<sup>10</sup> The existing UK emergency services communication infrastructure. See further paragraph 27 below.

<sup>11</sup> These estimates are based on volumes (units) sold.

- (a) functionality for use on closed networks (ie networks with access restricted to a defined group of users);
  - (b) capabilities including group calls, call priorities, emergency calls and encryption; and
  - (c) a guarantee of confidentiality and reliability of communications.
24. The public safety and security (PSS) services are the main users of PMR systems.<sup>12</sup> Commercial customers include transport companies and utility companies and protected infrastructures (such as airports and nuclear plants).
25. PMR systems consist of an infrastructure (this is the core of a radio system that transmits and receives all audio or data from the devices), devices (which include handsets, mobile radios and data terminals) and services (maintenance and repair, deployment, systems integration and network operation).<sup>13</sup>
26. PMR systems can be based on either analogue or digital technology. In Europe most networks are based on digital technologies. Relevant digital technologies include:
- (a) Digital Mobile Radio (**DMR**)<sup>14</sup>
  - (b) Terrestrial Trunked Radio (**TETRA**)<sup>15</sup>
  - (c) Long-Term Evolution (**LTE**)<sup>16</sup>
27. At present, in Great Britain (**GB**)<sup>17</sup>, PSS use the Airwave network (**Airwave**) which is based on TETRA technology. Airwave was built in 2000 by British Telecommunications (**BT**) and was operated by BT until 2007 when it sold it

---

<sup>12</sup> Police, security services and other public services such as fire and ambulance services.

<sup>13</sup> The CMA has focused its assessment of the Transaction on the provision of devices by Parties. In *Motorola/Airwave* the CMA considered the upstream supply of the Airwave network/infrastructure as a separate frame of reference. However, in the present case the Parties have confirmed that there are no vertical overlaps between them, and no third parties raised any vertical overlaps. The CMA understands that associated services are usually provided by the supplier of the device(s).

<sup>14</sup> It refers to digital mobile radio compliant with the European Telecommunication Standard Institute (ETSI) standard TS 102 361.

<sup>15</sup> Formerly known as trans-European Trunked Radio is an ETSI standard for a trunked radio system and two-way transceiver specification.

<sup>16</sup> LTE is a standard for high-speed wireless communication for mobile phones and data devices based on GSM/EDGE and UMTS/HSPA technologies. It increases the capacity and speed using a different radio interface together with core network features. It is compatible with 2G and 3G and it is often marketed as 4G LTE but it is not clear that it meets the technical criteria of a 4G wireless service.

<sup>17</sup> In Northern Ireland there is a separate TETRA network owned and operated by the Police Service of Northern Ireland. It has a separate accreditation process.

to Macquarie Communications Infrastructure Group (Macquarie).<sup>18</sup> Motorola Solutions Inc (**Motorola**) acquired Airwave on 19 February 2016.<sup>19</sup>

28. All devices using Airwave require accreditation by the National Cyber Security Centre (NCSC, a sub-department of the GCHQ). This accreditation is made on each model and software version to ensure that the necessary technical capabilities and appropriate security protocols and confidentiality are maintained. This report will refer to these devices as **Airwave-TETRA devices**. All GB PSS organisations must use Airwave-TETRA devices. In addition to PSS, several organisations which might need to communicate with a PSS organisation in certain situations are also Airwave-accredited users and must use Airwave-TETRA devices.<sup>20</sup>
29. The ESN will replace Airwave and provide telecommunications infrastructure to the UK PSS. The ESN will use an advanced 4G-based technology facilitating the transmission of voice, data and images.
30. The Home Office told the CMA that its current expectation is that the transition to the ESN will have completed by April 2020 at which point Airwave will be switched off. Some third parties told the CMA that due to the complexity of the project, they expect some further delays in the original project schedule which anticipated the ESN being operational by December 2019. Devices will require accreditation to operate on the ESN.
31. The CMA understands that as part of the phasing-out of Airwave and the phasing-in of the new ESN, [a competitor] has agreed with the UK government that [a competitor] will assist with the provision of interoperability services between the two networks up until Airwave is switched off.<sup>21</sup>
32. Ofcom has already notified organisations which use Airwave that it will be switched off once the transfer to the ESN completes. This will not affect the operability of TETRA devices that are used on private networks other than Airwave (**non-Airwave TETRA**). Users of those devices may decide to continue using TETRA-based devices or switch to other technologies. Any change may require the renewal of their whole systems (for example base stations and antennae) and devices.

---

<sup>18</sup> See OFT's decision of 8 August 2007.

<sup>19</sup> See Completed acquisition by Motorola Solutions Inc. of Airwave Solutions Limited, 1 July 2016.

<sup>20</sup> The list of these designated 'sharer organisations' using Airwave is controlled by the UK's Office of Communications (**Ofcom**). It includes organisations such as the Coastguard services, Environmental Agency, HM Prison Officers or London Underground.

<sup>21</sup> See further CMA's *Motorola/Airwave* decision. Paragraphs 24-40.

## FRAME OF REFERENCE

### Product scope

33. The CMA's competitive assessment focused on the products the Parties currently produce, supply, distribute or service and on new devices in the Parties' pipelines or under consideration by them. These include:
- (a) Airwave-accredited TETRA devices (**Airwave-TETRA devices**)
  - (b) TETRA devices for use on private networks other than Airwave (**non-Airwave TETRA devices**)
  - (c) Dual- or single-mode devices for use on LTE networks
34. The latter category (c) encompasses potential products that the CMA considers it possible the Parties may supply in the future. On the basis that the market(s) for these products are either undeveloped, nascent or uncertain, we consider these together as one category of products which may include (but not be limited to):
- (a) Dual-mode radio devices for use on Airwave and the ESN;<sup>22</sup>
  - (b) Dual-mode radio devices for use on non-ESN LTE networks;<sup>23</sup>
  - (c) Single-mode radio devices for use on the ESN;<sup>24</sup> and/or
  - (d) Single-mode radio devices for use on non-ESN LTE networks.
35. On the demand side, the substitutability of devices based on different technologies will vary depending on the time, needs and circumstances of each customer. For example, a PSS which requires connection to Airwave (or, in the future, the ESN) will only be able to procure Airwave-accredited or ESN-accredited devices and systems respectively. By contrast, a commercial customer deciding whether to upgrade an existing private network or switch to a new technology may compare different technologies and/or devices. Such procurement decisions might also be influenced by the scale and scope of the order: replacement of a few devices or an overall switch of the private network (including base stations, antennae and consequently devices).

---

<sup>22</sup> The CMA understands that these devices would be compatible with Airwave and the ESN.

<sup>23</sup> The CMA uses 'dual-mode radio devices for use on non-ESN LTE networks' to refer to devices that are compatible for use on either TETRA (non-Airwave) or other PMR networks, in addition to non-ESN LTE networks.

<sup>24</sup> The CMA understands that these devices would, as for Airwave-TETRA devices, require accreditation and therefore considers them separately to single-mode radio devices for use on non-ESN LTE networks.

36. From the supply side, as explained above, substitutability (for example between TETRA devices) may be constrained by accreditation requirements. Further, some manufacturers might specialise in individual technologies (for example, DMR or TETRA).
37. On the basis of the evidence received and in the time available for this investigation, the CMA believes it is reasonable to take a cautious approach and assess the competitive impact in each type of TETRA device separately, noting that the degree of substitutability among devices varies depending on the timing and scope of the procurement decision and requirements of each end-user.

### **Geographic scope**

38. In *Motorola/Airwave*,<sup>25</sup> the CMA found that while suppliers of radio devices supply TETRA devices on an EEA (and worldwide) basis, TETRA devices for use on Airwave in GB need to be approved and tested for such use within GB. In the case of Airwave TETRA devices, the relevant geographic scope is therefore GB.
39. In relation to the other frames of reference<sup>26</sup> the CMA believes it is reasonable to take a cautious approach. Therefore, on the basis of the evidence received, and while acknowledging the EEA aspects of competition, it has considered the impact of the Transaction in the UK.

## **COMPETITIVE ASSESSMENT**

### **Counterfactual**

40. The counterfactual is an analytical tool used in answering the question on whether a merger gives rise to an SLC. The SLC test involves a comparison of the prospects for competition with the merger against the competitive situation that would prevail absent the merger (the Counterfactual). In Phase 1 competition assessments, the CMA generally adopts the prevailing conditions of competition as the counterfactual against which to assess the impact of the merger.
41. Hytera submitted that the relevant counterfactual to be the pre-Transaction conditions. However, the Parties stated repeatedly that [REDACTED] and this

---

<sup>25</sup> Completed acquisition by Motorola Solutions Inc. of Airwave Solutions Limited, 1 July 2016, paragraph 64.

<sup>26</sup> See paragraph 33 (b) and (c) above.

might impact on its ability to compete effectively absent the Transaction.  
[REDACTED].

42. The CMA's analysis concluded that Sepura [REDACTED]. However, Sepura has taken steps to address these issues and its FY2017 interim report shows it has improved its backlog by €[REDACTED]m. In addition, it is [REDACTED]. On balance, the CMA considers this to be evidence that [REDACTED].
43. Accordingly the CMA considers that if the Transaction were not to go ahead [REDACTED], the most likely scenario would be one in which Sepura remained in the market. Therefore the appropriate counterfactual in this case is the prevailing conditions of competition.

### Market shares

44. The CMA received evidence from the Parties, customers and competitors that Hytera, Sepura and Motorola are the three main suppliers of all (Airwave and non-Airwave) TETRA devices (**all TETRA devices**) in the UK. The Home Office confirmed that Motorola and Sepura are presently the only two suppliers in the UK that have the necessary accreditation to supply Airwave-TETRA devices [and which currently supply such devices].
45. The Parties told the CMA that their combined share of supply of all TETRA devices in the UK in 2015 was approximately [REDACTED]%.<sup>27</sup> However, their respective areas of focus are complementary:
  - (a) Sepura's share of supply of TETRA devices in 2015 was [REDACTED] %, which comprised almost entirely of Airwave-TETRA devices and only a small number of sales of non-Airwave TETRA devices.
  - (b) Hytera's share of supply of TETRA devices in 2015 was [REDACTED] % and comprised solely non-Airwave TETRA devices.<sup>28</sup>
46. As such, the increment to Parties' estimated share of supply of all TETRA devices in the UK is approximately [REDACTED]%.
47. Up to four other suppliers<sup>29</sup> were mentioned by the Parties and [a third party] as competitors in the supply of TETRA devices. The CMA has confirmed that

---

<sup>27</sup> These estimates are based on volumes (units) sold and use IHS estimates of total sales of TETRA terminals in the UK to calculate shares of supply.

<sup>28</sup> See footnote 26 for methodology. It should be noted that the exact shares of supply may vary according to how many devices are replaced by each customer group in each year.

<sup>29</sup> [REDACTED].

one of these firms is not a current supplier but is seeking to enter the market. Within the limited time available, the CMA has been unable to confirm the current position or intentions of the other three.

### **Theory of Harm - horizontal unilateral effects**

48. The CMA's competitive assessment tests the validity of different theories of harm (**ToH**) against the counterfactual. In this Transaction, the CMA has identified horizontal unilateral effects<sup>30</sup> as the only ToH which could potentially materialise in the frames of reference outlined above and considered in detail below. Under this ToH, the loss of constraint between Hytera and Sepura would result in increased prices and/or the reduction in quality of the products in which the Parties overlap, or may overlap, in the supply of.
49. The CMA has assessed whether the Transaction gives rise to a realistic prospect of an SLC as a result of horizontal unilateral effects in:
  - (a) the supply of Airwave-TETRA devices;
  - (b) the supply of non-Airwave TETRA devices; and/or
  - (c) the future supply of dual-mode or single-mode radio devices on LTE networks.
50. The CMA's investigation identified these as areas of actual or potential overlap between the Parties. Each ToH relating to horizontal unilateral effects is discussed in turn below.

### ***ToH 1 - The supply of Airwave-TETRA devices***

51. The CMA considered whether pre-Merger, Hytera, Sepura and other suppliers of TETRA devices competed in the supply of TETRA devices for use on Airwave.
52. Hytera has never supplied Airwave-TETRA devices. It submitted that it has engaged with the Home Office [REDACTED] but has not attained the security accreditation required for its models and software to supply Airwave-TETRA devices and the likelihood [REDACTED] in the foreseeable future remains unclear.

---

<sup>30</sup> [Merger Assessment Guidelines](#), from paragraph 5.4.1.

### *Closeness of competition*

53. The degree of competition for Airwave-TETRA devices which could be expected between the Parties in the absence of the Transaction is dependent, amongst other things, on the timing of the expected switch-off of Airwave and the roll-out of the ESN.
54. In *Motorola/Airwave*, the CMA was told that customers were expected to begin transitioning to the ESN in the final quarter of 2017 and that Airwave would be switched off in December 2019, with the possibility of only a short delay. As such, the CMA concluded that there was likely to be very few sales of Airwave-TETRA devices in the future. The CMA also found that to the extent that further sales of TETRA devices were made, the majority would be under existing contracts with no competition between suppliers of TETRA devices (that is, not by open tender).
55. However, as mentioned above, the CMA understands that the Parties and third parties now expect some delay to the roll-out of the ESN. This is likely to result in:
  - (a) a need to maintain and service the existing stock of Airwave-TETRA devices until Airwave is switched off
  - (b) higher than previously forecast demand for new Airwave-TETRA devices before Airwave is switched off; and
  - (c) demand for dual-mode radio devices (discussed in ToH 3 below).

### *Existing stock of Airwave-TETRA devices*

56. Sepura's stock of Airwave-TETRA devices for use on Airwave is significant; according to an IHS industry report,<sup>31</sup> the installed base of active TETRA devices used by PSS organisations in the UK (for which Sepura is one of two [key] suppliers) was [REDACTED].
57. Internal documents submitted by the Parties state that [REDACTED]. Two third parties told the CMA that they have concerns about the impact of the Transaction on their existing fleet of Airwave-TETRA devices, currently supplied by Sepura, before the transition from Airwave to the ESN.
58. The Home Office told the CMA that it is taking action to ensure that Sepura's customers continue to have access to the necessary maintenance services

---

<sup>31</sup> IHS Technology, TETRA terminals report 2016, 31 March 2016.

for their existing fleet of Airwave-accredited TETRA devices until Airwave is switched off. Accordingly the CMA considers the impact of the Transaction on existing customers of Sepura's Airwave-TETRA devices will be limited.

*Demand for new Airwave-TETRA devices*

59. The Parties and third parties told the CMA that there is likely to be demand for new stock of Airwave-TETRA devices, before the transition from Airwave to the ESN is completed. Internal documents submitted by the Parties state that Sepura believes that [REDACTED]. The CMA heard from one third party that it expects 'significant demand from an end-user of [REDACTED] units'.
60. If, following the Transaction, new devices produced by the merged entity were not granted the necessary accreditation, [a third party] would be the only [active] supplier of Airwave-TETRA devices which would be a concern for the CMA.
61. However, there are reasons to support a conclusion that such a concern would not arise:
  - (a) The Home Office told the CMA that any new accreditation would be assessed on pure technical factors for each model and software version.
  - (b) The Home Office has an incentive, [as the body responsible for public safety in the UK, to act on behalf of Police Forces in GB] to retain Sepura as a provider of Airwave-TETRA devices, including the servicing and maintenance of existing (and new) Airwave-TETRA devices.<sup>32</sup>
  - (c) In contrast with the views of some third parties, [a Third Party] expects no, or a very limited number of new Airwave-accredited devices to be procured given the short-life time expectancy remaining of Airwave.
62. In addition, in the event of an increase in demand for Airwave-TETRA devices, new entry into this market could take place. The CMA has received evidence that another supplier (that does not currently produce or sell TETRA handsets in the UK) is exploring opportunities to sell TETRA handsets to customers prior to the transition to the ESN. [The Home Office has also told the CMA that there exist other suppliers with Airwave-Tetra devices. It is possible that these suppliers may be able to enter or expand to supply new Airwave-TETRA devices.]

---

<sup>32</sup> The CMA acknowledges that this submission may be subject to the adoption of appropriate steps to address the Home Office's public interest considerations.

*Conclusion on ToH 1 – horizontal unilateral effects in the supply of Airwave-TETRA devices*

63. For the reasons above, and in particular the Home Office's intention and incentive to ensure that more than one supplier remains accredited both to supply PSS with Airwave-accredited TETRA devices and to service and maintain such devices, the CMA does not believe there is a realistic prospect of an SLC in the supply of Airwave-TETRA devices.

***ToH 2 - The supply of non-Airwave TETRA devices***

64. The CMA considered whether, pre-Merger, Hytera, Sepura and other manufacturers of TETRA devices competed in the supply of non-Airwave TETRA devices for use on private TETRA networks.
65. The CMA understands that the market for non-Airwave TETRA devices is substantially smaller than the market for devices that can be used on Airwave. In 2015 revenue generated by the top three suppliers of TETRA devices for commercial use in the UK was approximately £[REDACTED]m compared to £[REDACTED]m for Airwave devices. The respective figures for 2016 were £[REDACTED]m and £[REDCATED]m.
66. The CMA understands that the Parties have overlapped in the supply of non-Airwave TETRA devices since 2015.<sup>33</sup> In 2015 Hytera generated approximately £[REDACTED]m in revenue from the sale of these devices while Sepura's sales generated some £[REDACTED]. Sepura expects its revenue from non-Airwave TETRA devices to increase to £[REDACTED]m in 2017.<sup>34</sup>
67. The Parties told the CMA that Sepura is not Hytera's closest competitor in non-Airwave TETRA devices and that [REDACTED]. The CMA has been able to confirm this from data collected from [a third party]. The Parties and one competitor submitted that there are at least two additional suppliers of non-Airwave TETRA devices. However, customers of Hytera and Sepura did not name these firms as potential suppliers.
68. The CMA expects that barriers to entry to the supply of non-Airwave TETRA devices in the UK are likely to be lower than in the supply of devices for use on Airwave, due to there being fewer or no UK-specific security

---

<sup>33</sup> The CMA collected data since 2014. In this year, Sepura did not produce any non-Airwave TETRA devices. The CMA is not aware of any historical overlaps between the Parties.

<sup>34</sup> Hytera did not provide estimated revenue for 2017.

considerations, which may mean that there are greater opportunities for entry and/or expansion by other PMR operators into the UK market.

69. The Parties told the CMA that there is also likely to be some demand-side substitution between non-Airwave TETRA devices and alternative PMR technologies (including DMR, dPMR<sup>35</sup> and NXDN<sup>36</sup>). This suggests that the contestable market may be larger than the supply of non-Airwave TETRA devices (for use on private networks).
70. Third parties confirmed this and told the CMA that it is a commercial decision whether to employ TETRA or a different type of technology such as DMR Tier 3 systems which offer similar functionality. It was noted, however, that this substitutability might not be available if the need is to replace only a few devices in an existing private network or if specific functionality is required that is not available on alternative technologies.
71. Ofcom has confirmed that private non-Airwave TETRA networks will remain operational beyond the switch-off of Airwave. However, the CMA understands based on [REDACTED] that there has been an increasing focus on the potential of LTE broadband solutions that offer functionality such as audio visual that is not supported on TETRA.
72. No third parties raised competition concerns in relation to the supply of non-Airwave TETRA devices for commercial use. In fact, two customers believed it would be a positive step which would increase investment in R&D and help to strengthen competition against the market leader, [a competitor].

*Conclusion on ToH 2 - horizontal unilateral effects in the distribution of non-Airwave TETRA devices*

73. Sales of the relevant product within the UK are small, and may be expected to decline further as other technologies compete more with TETRA technology. Based on the available evidence, Sepura has not imposed any material competitive constraint on [a competitor] [REDACTED] or Hytera. The CMA also understands that other international providers are already or should be able to supply customers in the UK with limited or no geographic presence (as Hytera has done), and so the market may be broader than the UK.
74. Therefore for the reasons set out above the CMA does not believe that there is a realistic prospect of an SLC as a result of this theory of harm.

---

<sup>35</sup> Digital Private Mobile Radio.

<sup>36</sup> NXDN is a Common Air Interface technical protocol for mobile communications that is intended for commercial Private Land Mobile Radio and low-end public safety communications systems. Source: See Footnote 31.

### **ToH 3 – The future supply of dual-mode and/or single-mode radio devices on LTE networks**

75. As described above in *product frame of reference*, there are a number of potential products (which may or may not be distinct) in which the CMA considers it possible that the Parties may overlap in the future in the absence of the Transaction. These include (but may not be limited to):
- (a) Dual-mode radio devices for use on Airwave and the ESN (**ESN dual-mode devices**);
  - (b) Dual-mode radio devices for use on non-ESN LTE networks (**non-ESN dual-mode devices**);
  - (c) Single-mode radio devices for use on the ESN (**ESN LTE devices**); and
  - (d) Single-mode radio devices for use on non-ESN LTE networks (**non-ESN LTE devices**).

#### *Dual-mode radio devices for use on the ESN*

76. In *Motorola/Airwave*, the CMA was told by a small number of third parties that delays to the ESN timetable [REDACTED] would result in demand by customers for dual-mode radio devices that will work on both Airwave and the ESN.
77. The Home Office has confirmed that there was demand for ESN dual-mode devices [REDACTED]. [REDACTED] but none was able to provide the specific functionality required by the PSS. As such, the procurement project was put on hold earlier this year.
78. Documents submitted by the Parties to the CMA set out their intentions to [REDACTED].
79. The CMA has not received any other representations that indicate there will be a market for ESN dual-mode devices.

#### *Dual-mode radio devices for use on non-ESN LTE networks*

80. The CMA understands that Hytera [REDACTED].
81. [REDACTED] CMA believes that Sepura is a potential competitor in this market; it has the technical capability to offer a dual-mode device, [REDACTED].

82. The CMA has heard from a third party that there are three additional potential suppliers of non-ESN dual-mode devices in the UK. The CMA would also expect supply-side substitutability for dual-mode radios for use on non-ESN LTE networks; the key difference being the security accreditation requirement and not the technology. As such, the four potential suppliers (in addition to the Parties) identified by [REDACTED] are also likely to be potential suppliers in this market.
83. The Parties submitted that UK private network customers who are choosing to deploy LTE solutions<sup>37</sup> (which offer increased capacity and speed vis-à-vis alternative PMR technologies) are unlikely to require an interim solution such as a dual-mode device; these customers mainly use small-scale networks that will enable all users to switch to the new technology simultaneously.
84. Nonetheless, some third parties told the CMA that they were aware of, or expect there to be, demand for dual-mode radio devices for use on non-ESN LTE networks. Two third parties indicated an intention to purchase dual-mode radio devices from Hytera and/or Sepura. However, the projected purchase figures are negligible, indicating that the market for these devices is likely to be limited.

*Single-mode radio devices for use on the ESN*

85. The Home Office is procuring a single supplier for the provision of ESN devices under a framework agreement that can be used by the UK PSS and other 'sharer' organisations<sup>38</sup> that currently utilise Airwave-TETRA devices. The Home Office told the CMA that [REDACTED] potential suppliers have already signalled their interest in response to the tender notice it published in the Official Journal of the European Union on 5 April 2017.
86. The Home Office confirmed that the [REDACTED] interested suppliers include the Parties. Hytera told the CMA that [REDACTED].
87. The Home Office told the CMA that this is an open competition and it has no preference for any supplier, subject to the requirements set out in the contract notice being satisfied.

---

<sup>37</sup> See Footnote 16 for a full definition.

<sup>38</sup> See Footnote 20.

*Single-mode radio devices for use on non-ESN LTE networks*

88. Evidence from the Parties demonstrates the nascency of this product area. The CMA understands that the standard for LTE technology has not yet been agreed which means there is no access to the components required to support PMR functionality on LTE networks. Given the lack of certainty in relation to the required specifications, the Parties told the CMA that the business case for developing non-ESN LTE devices is currently [REDACTED].
89. There is not enough information for the CMA to draw any conclusions about a potential market(s) for non-ESN LTE devices. We do not know how this market(s) will evolve, and in particular whether and how much demand will be satisfied by the commercial market for mobile phones.
90. The CMA considers that it is reasonable to expect that many (if not all) of the suppliers that have registered their interest with the Home Office to supply ESN LTE devices will have the technical capability to supply on non-ESN networks. Drawing parallels with dual-mode devices, the CMA also anticipates that barriers to entry to this potential future market would likely be lower than for ESN-compatible devices given the more limited or a lack of security considerations for these products.

*Conclusion on ToH 3 - the future supply of dual-mode and/or single-mode radio devices on LTE networks*

91. Based on the evidence before it, the CMA believes that any demand for dual-mode radio devices is likely to be limited in volume and time and four other potential suppliers have been identified by [REDACTED].
92. As outlined above, any market(s) for single-mode devices for use on LTE networks (including ESN and non-ESN networks) is yet to emerge or still in its infancy so we have limited information upon which to base any assessment. The CMA notes that the number of suppliers that have registered their interest with the Home Office for the provision of ESN radio devices may suggest that barriers to entry or expansion to the supply of these devices are low.
93. For the reasons set out in this section the CMA does not believe that there is a realistic prospect of an SLC in relation to the supply of dual-mode and/or single-mode radio devices on LTE networks.

## **Conclusion**

94. For the reasons given above, the CMA does not believe there that it is or may be the case that the Merger may be expected to result in a substantial lessening of competition within any market or markets in the United Kingdom.<sup>39</sup>

## **PUBLIC INTEREST CONSIDERATION**

### **Summary of interested parties**

95. Section 44(3)(b) of the Act requires the CMA to provide a summary of representations it has received and which relate to the public interest consideration, national security, and which is or may be relevant to the Secretary of State's decision as to whether to make a reference for a phase 2 assessment under section 45 of the Act.
96. The CMA received representations from the Home Office and two third parties, a summary of which is set out below.
97. The CMA is not expert in national security matters and therefore, in Phase 1, it only summarises the representations made to it, in this case, primarily by the Home Office.<sup>40</sup>

### ***The Home Office***

98. The Home Office told the CMA that it believes national security is relevant to the Merger in order to:
- (a) protect sensitive information and technology; and
  - (b) maintain UK capabilities in servicing and maintaining radio devices used by emergency services and other agencies in the UK.
99. Sepura's devices use sensitive technology and are used by the UK's emergency services and other UK authorities to transmit and store sensitive information. In the Home Office's view, unauthorised access to this technology and information [REDACTED] or insufficient security controls on access could directly prejudice the operations and security of the emergency

---

<sup>39</sup> Accordingly a reference under section 33 of the Act would not be possible. Therefore it is not necessary to reach conclusions under sections 44(4)(d)-(f) of the Act as to whether any exceptions to the making of a such reference apply or whether it would be appropriate to accept competition undertakings in lieu of such a reference.

<sup>40</sup> See CMA2, paragraph 16.7, fourth bullet and see also CMA2, paragraph 16.24, for the CMA's approach in special public interest intervention notice cases.

services and other authorities, and have wider implications for national security.

100. Areas of concern for the Home Office arising as a result of the new ownership (Transaction) include physical security in relation to company processes and premises, system security in IT systems, and personnel security in relation to employees and company management. The Home Office therefore considers that it would be necessary under any new ownership arrangements to ensure that such information and technology is protected and access limited.
101. In relation to the maintenance of UK capabilities, the Home Office submitted that Sepura is a key supplier of radio devices to the UK's emergency services and other UK authorities. The work of the UK emergency services and other government agencies is central to the protection of public safety and national security, and relies on availability of functioning radio devices.
102. The Home Office stated that although Sepura Airwave-TETRA devices currently used by the emergency services are due to be phased out, there is a risk that, under new ownership, the repair and maintenance currently provided by Sepura could cease to operate or be sold or transferred abroad before the end of that period. Devices could not be sent abroad because of the need to protect information and technology outlined above. New devices could not be procured, nor an alternative repairer set up, without a significant notice period.
103. The Home Office therefore considers that it would be necessary under any new ownership arrangements to include some provision for ongoing UK maintenance and repair of existing Sepura devices used by the emergency services.

### ***Other third parties***

104. [A third party] told the CMA that Sepura's products are critical to the UK national safety and emergency services infrastructure and that it is therefore imperative that the radios produced by Sepura are not used for improper purposes or used to acquire illicitly IP rights, technology, sensitive information, etc.
105. [A third party] believes that [REDACTED].
106. A Sepura shareholder wrote to the CMA expressing the view that the Merger does not give rise to national security issues. He submitted that the technology owned by Sepura is not unique and there are many ways to apply security measures to wireless communications systems. The shareholder also told the CMA that Hytera a private, non-government company and has traded

in the radio telecommunications sector since 1993. The shareholder also submitted that Hytera already has handsets in secure situations with the Government, such as [REDACTED]. The third party further noted that the UK Government already [REDACTED] production of nuclear material and power in the UK, and at a much greater cooperation and scale.

### ***Home Office advice on third party representations and national security matters***

107. Separately to representations received by the CMA, the Home Office received representations from third parties concerning national security, including from Government departments, Government agencies and law enforcement bodies in the UK and internationally. The CMA understands that some of those representations concern highly sensitive national security related matters and materials. The CMA has not seen or considered the representations received directly by the Home Office.
108. The Home Office has been considering the specific risks identified in relation to national security matters and possible remedies to address those risks. The CMA understands that the Home Office will advise the Secretary of State directly in this regard. The CMA understands that the third party views received by the Home Office will be included in the Home Office's advice which will go direct to the Secretary of State.
109. The CMA is not expert in national security matters and therefore, in Phase 1, it only summarises the representations made to it. The CMA has no reason to doubt any representations made by the Home Office on the appropriateness of the undertakings to remedy or prevent the specific effects adverse to the public interest identified by it and which are briefly described below. Consistent with its phase 1 role, CMA therefore does not provide in this report advice or recommendations on the national security public interest consideration under section 44(6) of the Act.<sup>41</sup>

### **Remedies – undertakings in lieu**

#### ***CMA's advice to the Secretary of State on the form of Public Interest Undertakings***

---

<sup>41</sup> See CMA2, paragraph 16.7, fourth bullet.

110. The CMA understands that the Home Office has been engaging with the Parties on possible undertakings to resolve the national security concerns arising from the Transaction.
111. Given the CMA's expertise in designing and implementing remedies as part of its functions, the CMA has provided some views to the Home Office on the form such undertakings generally take, including the importance of such issues as compliance obligations and future reviews.
112. Although the CMA is aware of the general nature of the national security concerns held by the Home Office,<sup>42</sup> the CMA provided no views to the Home Office on the substance of any undertakings, were they to be required and offered. The CMA understands that the Home Office will be addressing these issues in its advice to the Secretary of State.

---

<sup>42</sup> As outlined at paragraph 93 above.

## **ASSESSMENT AND ADVICE TO THE SECRETARY OF STATE**

113. The CMA produces this report to the Secretary of State pursuant to its duty under section 44(2) of the Act, following investigations carried out under section 44(7).
114. This report contains advice on considerations relevant to the making of a reference under section 33 which are also relevant to the Secretary of State's decision as to whether to make a reference under section 45 of the Act, namely that the CMA:
- (a) 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;
  - (b) does not believe that the creation of that merger situation may be expected to result in a substantial lessening of competition within a market or markets in the United Kingdom for goods or services.
115. This report also contains a summary of the representations about the case which it has received (from the Home Office and from two third parties) which relate to the national security public interest consideration mentioned in the Notice.
116. This report does not contain advice or recommendations on the public interest consideration under section 44(6) of the Act.

**Andrea Coscelli**  
**Acting Chief Executive Officer**  
**4 May 2017**

## ENDNOTES

1. The CMA has added the words in square brackets in paragraphs 44, 56, 60 and 62 to the confidential version of its report.

Since that report was submitted to the Secretary of State prior to the deadline on 4 May 2017, the Home Office has confirmed to the CMA that its approved list of TETRA devices includes models manufactured by three other suppliers. These suppliers are however understood to operate only a small number of existing devices and are not active in selling new Airwave-TETRA devices. One of these suppliers submitted to the CMA that it does not currently supply any TETRA devices in the UK (Airwave or non-Airwave).

2. The CMA has changed the words in square brackets in paragraph 61(b), which previously read “as the major customer of these products” in the confidential report.
3. None of the above changes affect the CMA’s reasoning or conclusions which are contained in this report.