



House of Commons  
Committee of Public Accounts

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# The Emergency Services Network

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**Sixty-Fourth Report of Session  
2022–23**

*Report, together with formal minutes relating  
to the report*

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## Summary

The Home Office (the Department) is attempting to create the Emergency Services Network (ESN) to provide a new mobile communications service for the emergency services in the UK. ESN will replace the existing Airwave system, which although reliable, is expensive, does not provide modern data services, and will eventually become obsolete. The Department started the programme to deliver ESN in 2015 and expected to turn off Airwave in 2019. Now, in 2023, the Department still does not know when ESN will be ready and has little to show the taxpayer for its efforts, despite having spent some £2 billion. Delays to ESN have meant the emergency services have borne significant costs in running Airwave for longer. They have temporarily disbanded their ESN teams and found their own ways to access mobile data.

As we feared, the Department's attempt to reset ESN in 2018 did not work and the programme is delayed yet again. The Department now needs to replace Motorola, one of its key suppliers, and plans to extend its contract with EE. Until a new supplier is in place, the Department can make only limited further progress. The Department considers that the technology ESN needs is now readily available in the market, but we are concerned that even after a new supplier is appointed, ESN will still be a high-risk programme with many challenges, including integrating the various parts of ESN together, testing the technology, providing the right level of coverage and resilience, and transitioning all emergency services onto the new service. The Department continues to be optimistic that it can solve these problems, but this optimism is disconnected from the reality that the Department has never been able to produce a realistic plan for delivering ESN and there is not yet evidence that the technology will work as well as Airwave. The Department claims it has learned not to set another arbitrary deadline for turning off Airwave, but we have heard this before. The Department did not give us confidence that it could break the cycle of over-optimism followed by delays.

The only significant progress is that the Department's new programme leadership team has won back the support of the emergency services. But the Department still needs to prove that it can deliver. Even if the Department gets the programme back on track, it will take at least 10 years before the savings from ESN justify its cost, and the Department has paused its work to decide how ESN will be run as a live service. This means that the long-term risks to value-for-money are still high. There is also a risk that extending the role of EE may replicate some of the issues with Airwave, where a lack of competition meant a monopoly supplier could make excessive profits at the taxpayer's expense.

## Introduction

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All 108 police, fire and ambulance services in England, Scotland and Wales communicate using Airwave, a dedicated mobile communications network that is critical to their ability to do their jobs. Airwave performs well but is becoming obsolescent, is expensive and does not provide access to modern data services. The Department is replacing Airwave with the Emergency Services Network (ESN), which will use a commercial mobile phone network and so be cheaper whilst also providing modern data. In 2015, the Department awarded contracts to deliver ESN to EE, for the main network infrastructure, and to Motorola for software to replicate critical features, such as push-to-talk – the ability to be connected to a control room or another device at the push of a button, which Airwave has but which commercial mobile phone networks do not support.

The programme to deliver ESN has faced significant delays, and was reset in 2018. We have questioned the Department about its management of ESN 13 times, and issued three reports, each finding the programme to be high risk and raising concerns about the Department's ability to manage those risks. One such risk related to Motorola's dual position as owner of Airwave, and key supplier to ESN. In April 2021, the Home Office wrote to the Competition & Markets Authority (CMA) expressing concerns over Airwave's excessive profits and Motorola's weak incentives to complete ESN. To prevent the CMA from forcing it to sell Airwave, Motorola announced in November 2021 that it would leave ESN. The Department is currently looking for a new supplier to replace Motorola. Other parts of the ESN programme have also made less progress than expected, and the Department currently has no firm estimates of when it will finish building ESN or what it will cost.

## Conclusions and recommendations

1. **The Department is still far too optimistic about both the progress it has made and the challenges ahead, and therefore risks repeating the same mistakes again.** Since 2015 the Department has spent some £2 billion on ESN but has not delivered anything substantial or reduced the many risks. In 2019, we warned that Motorola's dual role in Airwave and ESN disincentivised it from delivering ESN, and although the Department has taken a necessary decision to replace Motorola, it did not resolve this situation through astute contract management. Instead, it has had to rely on the Competition & Markets Authority (CMA) investigating the Airwave contract and on Motorola deciding to leave ESN – a decision which the Department did not seem to anticipate. Were it not for the CMA, Motorola could still be making what the Home Office considered excessive profits from Airwave. The Department continues to say it is confident that it can find a new supplier who can provide the technology that ESN needs, but Motorola was the market leader, and the Department cannot guarantee that a replacement will be able to deliver what is still a complex programme. There are also other delays throughout the programme, which the Department acknowledges is the 'reddest' programme in a high-risk portfolio, but the Department appeared complacent in its confidence that it could reduce the risks.

**Recommendation 1:** *The Department should test its confidence in its ability to deliver ESN by having the programme's Independent Assurance Panel publish an overview of progress and risks once the new user services contract that replaces Motorola is in place.*

2. **The Department's failure to deliver ESN creates a significant cost for the emergency services who must pay to fund ESN and to maintain Airwave for longer.** Delays have meant the Department itself has actually spent less than it expected on ESN, but the ultimate users of ESN have had to pay more. The emergency services must contribute, alongside funding from the Department, the Department of Health & Social Care and the Scottish and Welsh governments, to the cost of both ESN and Airwave, and will get no benefit from ESN until Airwave is turned off. Emergency services need to decide how to replace ageing Airwave devices and control rooms, but do not have enough information to know when to do this, because the Department has no timetable for ESN. Emergency services are facing financial pressures and have had to temporarily disband teams who will work on the transition to ESN, risking the loss of vital skills. The Department has not created any specific mechanism for helping emergency services bear the extra costs created by failing to deliver ESN. The CMA has proposed a charge control on Airwave which, once implemented, will make Airwave less expensive to run. But Airwave will still require investment to replace potentially obsolescent infrastructure and technology, and to ensure it keeps operating at its current good performance level. The Department does not yet understand the extent of these costs.

**Recommendation 2:** *As part of the new ESN business case, the Department should explore with users how savings created by the CMA imposing a charge control on Airwave can be used to help fund transition activities and new Airwave devices as well as maintaining Airwave.*

3. **The Department cannot yet prove to the emergency services that ESN will be good enough to replace Airwave.** There is now a broad consensus among emergency services and the programme's Independent Assurance Panel that ESN can work and that it remains the right approach. The Department believes that a widening market means ESN can now use off-the-shelf technology, but it is difficult for such a product to fully replicate Airwave, because Airwave is more complex than similar networks in other countries. Because each emergency service will decide for itself whether ESN can replace Airwave, the Department needs robust evidence from rigorous testing to prove that ESN fully meets all the needs of emergency services. Currently the Department does not have an agreed plan for when the different parts of ESN will be ready. Although emergency services are confident that the Department understands their needs, the Department's past approach to testing ESN has not been good enough, and there is still much left to check, including that coverage is available everywhere it is needed, including in buildings.

**Recommendation 3:** *The Department should set out an outline plan for the main building blocks of ESN by the end of 2023, including when they will be prototyped, built, and tested in real world conditions, and which includes sufficient time for testing by emergency services, and allows feedback to be incorporated into the final version of ESN. This information should inform the main business case which we understand is due in the first quarter of 2024.*

4. **We remain concerned the Department does not have the capability to successfully bring the various elements of ESN together.** ESN is a complex programme which was set up using a commercial approach that the Department admits is suboptimal but has decided not to change. Persisting with the same commercial structure means it will still have to contend with the same problems of integrating the work of different suppliers. The software Motorola was delivering must work seamlessly with EE's network, control room systems provided by an unknown number of vendors, and with devices (in aircraft and vehicles as well as handsets). We have often seen integration cause issues in major programmes, and remain concerned that the Department does not have the skills to make this work effectively. It has previously tried to use contracts to make suppliers responsible for integration or to acquire capabilities, but these approaches have not worked so far.

**Recommendation 4:** *By the time the new user services contract is in place, the Department should obtain an independent opinion on whether ESN has a credible integration plan and the resources in place to deliver it.*

5. **It is still not clear how the Department will ensure that there are clearly defined responsibilities or plans in place for operating ESN as a live service, raising questions about whether ESN will provide the intended benefits for the emergency services.** The expected benefits from ESN will only materialise if it is run effectively. For example, there will need to be a way of ensuring that any unforeseen consequences of ESN, such the prioritisation of ESN users preventing the public from communicating in an emergency, are appropriately managed. It will take at least 10 years before financial benefits from ESN will recoup the taxpayers' investment, and widespread use of commercial mobile data by emergency services has already reduced the potential efficiencies that ESN might bring. ESN could still help emergency services to coordinate their responses to major events and



standardise approaches to data. The latter will only happen if apps are developed for emergency services to use, but ESN has no current plans to enable this. The Department's current plans assume it will be responsible for running ESN as a live service, but it has paused work to design a future operating model.

**Recommendation 5:** *As part of the new business case, the Department should create a plan for how it will restart work on how ESN will operate as a live service and ensure the emergency services agree that the future operating model meets their needs.*

6. **The Department risks creating a new monopoly supplier in EE, which could reduce long-term value for money.** EE provides the main network infrastructure, but although it has made progress extending network coverage, it has not delivered on time, and still has work to complete. The Department has not introduced competition as quickly as it intended and, following previous extensions, it plans to award EE a new contract, again without competition. While the Department remains tied into a single network provider, emergency services cannot benefit from services provided by other operators. The Department claims it will be able to introduce competition later, because all its suppliers are following telecommunications standards, but incompatible assumptions made by different ESN suppliers about which telecommunication standards would be used was one of the issues that led to the 2018 reset.

**Recommendation 6:** *The Department should ensure that the new EE contract for ESN network infrastructure includes sufficient protection against EE making excessive profits and requires all infrastructure to fully comply with telecommunications standards and allows other network suppliers can be introduced in future if they are better value.*

# 1 Progress delivering ESN

1. On the basis of a report by the Comptroller and Auditor General, we took evidence from the Home Office (the Department), the Emergency Service Network (ESN) programme's Independent Assurance Panel, and representatives of the police, fire and ambulance services.<sup>1</sup>

2. All 108 police, fire and ambulance services in England, Scotland and Wales use Airwave, a dedicated communications network to communicate between the field and control rooms. Airwave is critical to the emergency services' ability to carry out their roles and performs well, generally exceeding its 99.86% availability target. But Airwave will eventually become obsolete and does not provide users with access to modern mobile data.<sup>2</sup>

3. In 2015, the Department let contracts with EE and Motorola to build a new network, known as ESN, to replace Airwave.<sup>3</sup> ESN will see emergency services given priority access to EE's commercial phone network. Motorola was contracted to provide software and systems, including critical features not normally found on a mobile network, such as a first-of-a-kind 'push-to-talk' functionality – the ability to be connected to a control room or another device at the push of a button, without having to wait for the recipient to answer.<sup>4</sup>

4. We have questioned the Department about its management of ESN at numerous sessions, and published three previous reports on this topic. Our first two reports in 2017 found the programme to be high risk and raised concerns about the Department's ability to manage those risks.<sup>5</sup> The programme has since been delayed several times, including a 2018 'reset'. In 2019 we concluded that we would continue to be concerned about the progress of this programme until the Department had a clear plan for delivery.<sup>6</sup> By June 2021, the timetable for turning off Airwave was delayed again, to 2026 and further delays are expected.<sup>7</sup> In June 2021, the Department estimated the cost of ESN would be £11 billion, but this estimate is being updated and will increase once the Department has revised its business case for ESN, not expected until 2024.<sup>8</sup>

5. Our previous reports also noted that the Department needed to manage the significant commercial risks arising from Motorola being both a key supplier to ESN and having a monopoly position as Airwave's owner.<sup>9</sup> In April 2021, the Department wrote to the Competition & Markets Authority (CMA) expressing concerns that Motorola's Airwave

1 C&AG's Report, [Progress with delivering the Emergency Services Network](#), Session 2022–23, HC 1170, 8 March 2023

2 C&AG's Report, paras 1, 10

3 C&AG's Report, para 2

4 C&AG's Report, para 2

5 Committee of Public Accounts, [Upgrading emergency service communications](#), Thirty-fifth Report of Session 2016–17; HC 770, 25 January 2017; Committee of Public Accounts, [Upgrading emergency service communications – recall](#), Fifty-second Report of Session 2016–17, HC 997, 21 April 2017; Committee of Public Accounts, [Emergency Services Network: further progress review](#), One Hundred and Eighth Report of Session 2017–19, HC 1755, 17 July 2019

6 Committee of Public Accounts, [Emergency Services Network: further progress review](#), One Hundred and Eighth Report of Session 2017–19, HC 1755, 17 July 2019

7 C&AG's Report, para 5

8 C&AG's Report, key facts, page 4

9 Emergency Services Network: further progress review, One Hundred and Eighth Report of Session 2017–19, HC 1755, 17 July 2019, para 5

profits were excessive and about Motorola’s incentives for completing ESN. The CMA opened an investigation and in November 2021, to remove the risk that it would be forced to sell Airwave, Motorola told the Home Office that it may not extend its involvement in ESN beyond December 2024. In 2022, the Home Office agreed to end Motorola’s contract early and has started to find a replacement. Other elements of the programme are also delayed, with some not able to progress until the Department finds a replacement for Motorola.<sup>10</sup>

## Setting a realistic timetable

6. The NAO reported that the Department has spent some £2 billion on ESN, but is still a long way from having a functioning service to replace Airwave.<sup>11</sup> In evidence to us, the Department considered that it had made some progress and that proceeding with ESN was now ‘inevitable’<sup>12</sup> because “failure is not an option”.<sup>13</sup> It stopped short of calling ESN a ‘success’, but said there had been “progress towards delivery”.<sup>14</sup> The fire service said delays had made the sector less willing to mobilise for future transition to ESN; and the police said they were ‘crying out’ for the Department to set a realistic plan.<sup>15</sup>

7. The Department said it was not being complacent, but acknowledged that even with the best team and governance arrangements it could assemble there was both considerable risk and a lot of work to do before ESN would be ready.<sup>16</sup> Nevertheless, it was determined to ‘crack on’ with ESN and was confident it could solve the problems.<sup>17</sup> While it acknowledged that optimism bias is a cultural issue in both the Department and wider civil service, and that it had been over-optimistic about ESN before, it claimed to have a better understanding now.<sup>18</sup> But when we asked if it could reduce the risk, it acknowledged that it would not know until it found a supplier to replace Motorola.<sup>19</sup> It acknowledged that ESN is its biggest, reddest and hardest programme in a portfolio “stuffed full” of very difficult programmes, and said it would be ‘brave’ to believe it had identified technical solutions for the entire programme.<sup>20</sup>

8. We asked whether the Department could have acted sooner to remove Motorola, and the Department acknowledged that, in hindsight, it wished different choices had been made when Motorola bought Airwave in 2016.<sup>21</sup> The Department said it had been aware of a possibility of that Motorola might leave ESN following delays, but had been surprised by Motorola’s “extreme and swift” reaction to the CMA investigation.<sup>22</sup> It also acknowledged

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10 C&AG’s Report, paras 4, 9, 19

11 C&AG’s Report, para 19

12 Q 13 (27 March)

13 Q 80 (27 March)

14 Q 14 (27 March)

15 Qq 2, 4 (26 April)

16 Qq 26, 99 (27 March)

17 Qq 31, 100 (27 March)

18 Qq 101–103 (27 March)

19 Q 84 (27 March)

20 Qq 26, 68, 99 (27 March)

21 Q 104 (27 March)

22 Qq 92, 96 (27 March)

the programme could have been delivered faster had it been able to solve issues with Motorola.<sup>23</sup> The Department estimates it has paid some £140 million to Motorola without the taxpayer getting full value.<sup>24</sup>

9. The NAO found that although replacing Motorola may have been necessary, Motorola was regarded as the market leader and replacing it does not guarantee that ESN will succeed.<sup>25</sup> The Department said it had received enough interest from potential bidders to be confident it could find a replacement, but it would take a few months to be certain.<sup>26</sup> The programme's Independent Assurance Panel (IAP) cautioned that Motorola's software had done around 85% of what ESN needed and told us that although it was possible to find a replacement, the Department needs to ensure the next supplier offers credible technology.<sup>27</sup>

### The impact of delays on the emergency services

10. The emergency services contribute, alongside funding from the Department, the Department of Health & Social Care and the Scottish and Welsh governments, to the cost of ESN. Delays to ESN meant the Department itself has spent less than it expected on ESN.<sup>28</sup> But emergency services have had to pay for additional Airwave devices as a result of the delays.<sup>29</sup> The Department did not know how long Airwave devices would now need to last, saying only it was working to give emergency services a "rough idea".<sup>30</sup> Given that Airwave handsets last 10 years, radios bought after the previous reset in 2018 will be obsolete in 2028 and may need replacing again before ESN is ready.<sup>31</sup> The ambulance service told us that it was now unsure whether to start replacing its Airwave terminals, and while the fire service had delayed buying new control rooms it agreed that it was 'unhelpful for the sector' not to know when ESN was going to be ready.<sup>32</sup>

11. Emergency services are temporarily disbanding their dedicated ESN teams that had been preparing for testing and transition, and the Department explained that there was currently very little for such teams to work on. It hoped each organisation would retain a "point of contact" but acknowledged that ESN might no longer be their priority.<sup>33</sup>

12. We asked the emergency services if they could quantify how much delays to ESN had cost them. The ambulance service interacts with ESN through the Ambulance Radio Programme (ARP) on which it had spent £9.5 million.<sup>34</sup> The fire service said it had spent £6 million preparing for transition, and £2 million on early versions of ESN which now had to be replaced.<sup>35</sup> Police forces estimate that Airwave devices cost £125 million since 2018, and expect to spend another £25m by 2026. Forces also spent a further £5 million

23 Q 92 (27 March)

24 Q 29 (27 March)

25 C&AG's Report, paras 19, 2.10

26 Q 66 (27 March)

27 Qq 13, 32 (26 April)

28 C&AG's Report, para 1.10

29 Q 34 (27 March)

30 Q 35 (27 March)

31 [ESN0001](#); Qq 22 (26 April)

32 Qq 16, 21 (26 April)

33 Q 40 (27 March); C&AG's Report, para 16

34 [Letter to the Chair of the Public Accounts Committee from Chris Lucas](#), Senior User, NHS Ambulance Radio Programme, 9 May 2023

35 [Letter to the Chair of the Public Accounts Committee from Ben Norman](#), Deputy Chief Fire Officer, NFCC Strategic Lead for Operational Communications, 12 May 2023

on transition teams. Although police forces did not consider all of this spend to be wasted, the intended benefits had not been realised, and they considered there was a strong case for financial assistance with future costs.<sup>36</sup>

13. We asked the Department how the transition from Airwave to ESN would be funded. It said it would work with users to make transition affordable, but the only way to do this was through usual ‘fiscal events’.<sup>37</sup> Although it said it would try and minimise the financial impact, it acknowledged there would inevitably be some financial impact on police forces, fire services and ambulance services.<sup>38</sup> While the Department was confident that HM Treasury would provide the necessary funding at the next spending review it could not rule out having to make cuts elsewhere to pay for ESN.<sup>39</sup> The National Police Chiefs’ Council (NPCC) told us that financial pressures had forced some police forces to use funding intended for ESN on other projects.<sup>40</sup>

14. The CMA has proposed a charge control on Airwave which, once implemented, will make Airwave cheaper for the Department and emergency services.<sup>41</sup> The Department considers that it can extend Airwave without creating a gap in service and without any negotiation with Motorola, provided it gives 12 months’ notice of an extension. It has not yet done this.<sup>42</sup> The Independent Assurance Panel said that, to maintain Airwave’s performance, Airwave would need ongoing investment to: replace obsolete components, retain skills for managing the network and to maintain the steel and concrete in some 4,000 masts. It considered the latter had not yet been fully costed by the Department.<sup>43</sup> The level of investment required will need to be agreed with Motorola.<sup>44</sup>

## Demonstrating to the emergency services that ESN is ready to replace Airwave

15. Since 2015, the market for the technology underpinning ESN has matured, so we asked whether ESN is now easier to deliver. The Department agreed that the programme was no longer at the cutting edge of technology.<sup>45</sup> It told us that several other countries are now taking a similar approach to ESN, although some use a dedicated network, and others have involved multiple network operators.<sup>46</sup> This means that rather than leading the way, the UK can now learn lessons from other countries.<sup>47</sup>

16. The Department now intends for ESN to use technology that is ‘as off-the-shelf as it can be’.<sup>48</sup> The Independent Assurance Panel told us that the technology ESN is proposing to use is now more credible than when ESN started, in part because telecommunications standards have moved on, and now cover the features that ESN needs, including push-

36 [Letter to the Chair of the Public Accounts Committee from Kier Pritchard](#), Chief Constable, NPCC lead for ESMCP, 15 May 2023

37 Qq 47, 48 (27 March)

38 Q 51 (27 March)

39 Qq 87, 89–91 (27 March)

40 [ESN0001](#)

41 [Mobile radio network services](#), Competition & Markets Authority, 5 April 2023

42 Qq 54–58 (27 March)

43 Q 20 (26 April)

44 Qq 54–55, 58 (27 March)

45 Q 16 (27 March); C&AG’s Report, para 14

46 Qq 69–70 (27 March)

47 Q 75 (27 March), Q 54 (26 April)

48 Qq 15, 72–74 (27 March)

to-talk.<sup>49</sup> It noted that Airwave is a sophisticated network to replace, more so than similar networks in other countries, and has many requirements that ESN technology must support.<sup>50</sup> The Independent Assurance Panel considered that there is still a need to examine the new supplier's approach carefully, because the technology may still be a 'little immature'.<sup>51</sup>

17. The emergency services expect to decide for themselves whether ESN is ready.<sup>52</sup> The police representative said they had been reassured that no force will be forced to adopt ESN.<sup>53</sup> The ambulance service was also positive, but despite a more centralised approach, there is no-one with central authority to mandate that individual ambulance trusts accept ESN.<sup>54</sup> The fire service emphasised that, once the agreed requirements for ESN are met they expected Chief Fire Officers would be able to accept ESN.<sup>55</sup> The Department said it had brought users inside the programme to make sure it understood the emergency service's requirements, so that no organisation would want to 'veto' ESN.<sup>56</sup> While it has tried this approach before, the Department says it had now undergone a 'mindset shift' on the importance of working with the emergency services.<sup>57</sup> Emergency service representatives agreed that the Department had engaged well with national groups including the National Police Chiefs' Council and the National Fire Chiefs' Council.<sup>58</sup>

18. Emergency services were confident that ESN would be able to meet their needs. The ambulance and police representatives said they felt ESN was taking the right approach, and the fire service representative emphasised the importance of ESN meeting the requirements agreed in 2015, which it considered had only changed slightly.<sup>59</sup> Although the police representative agreed the Department understood their requirements, they also told us that they needed to check that the requirements were included in the latest ESN contracts. Before accepting ESN they expected formal assurance from the Department's leadership, which they intend to independently verify. The police expected this to cover network performance as well as coverage. They said they would be concerned if time for testing was reduced.<sup>60</sup>

19. The Independent Assurance Panel agreed that testing at scale is crucial, including at real-world events such as the coronation and Notting Hill Carnival.<sup>61</sup> We asked the Department about its previous attempts at testing parts of ESN. The Department said it had needed to be re-run some tests three times, but had not allowed the time to do so, which had caused delays.<sup>62</sup> When asked about providing devices for testing, the Department acknowledged that only a small number of devices had ever been provided. It committed to getting preliminary devices in 'as many hands' as it could over the next 18 months. It also said it would listen to user feedback, so that ESN would work at '3 am,

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49 Qq 7, 55 (26 April)

50 Q 13, 54 (26 April)

51 Qq 6, 55, 56 (26 April)

52 C&AG's Report, para 16

53 Q 60 (26 April)

54 Q 59 (26 April)

55 Q 62 (26 April)

56 Qq 19, 41–42 (27 March)

57 Qq 45, 46 (27 March)

58 Qq 3, 4 (26 April)

59 Qq 10, 11 (26 April)

60 Qq 1, 60–61 (26 April)

61 Q 14 (26 April)

62 Q 77 (27 March)

in the dark, in the rain, with gloves on.’<sup>63</sup> It now expects the replacement for Motorola to provide these devices, and hopes these will be off-the-shelf handsets.<sup>64</sup> However, the NPCC considers a radio-style device is a core requirement for frontline police, ideally with the ability to work with both ESN and Airwave to reduce the risk and complexity of a future transition.<sup>65</sup> The Department said it would consider dual-mode devices if they were not too expensive.<sup>66</sup>

20. The coverage provided by ESN remains a key concern for emergency services.<sup>67</sup> The NPCC was concerned that, despite commitments from the Department for ESN to be as good as Airwave, the ESN 4G signal does not penetrate buildings as successfully as Airwave.<sup>68</sup> When we asked about the number of buildings in which ESN would work, the Department said its modelling suggested 2,000 to 4,000 locations still need to be checked.<sup>69</sup>

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63 Qq 23, 36, 37 (27 March)

64 Q 38 (27 March)

65 [ESN0001](#)

66 Qq 39, 44 (27 March)

67 Q 56 (26 April)

68 [ESN0001](#)

69 Q 25 (27 March)



## 2 Ensuring ESN provides value in the longer-term

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### Connecting the different parts of ESN together

21. As with most digital programmes, the various elements of ESN need to work seamlessly together for ESN to work;<sup>70</sup> This ‘systems integration’) is one of the main risks the Department needs to manage.<sup>71</sup> For example, the push-to-talk technology needs to integrate with handsets for individuals and devices in vehicles and aircraft and the mobile network. Control rooms use an unknown number of other systems that link to Airwave and will therefore need upgrading. The Department does not know how many vendors provide these systems.<sup>72</sup>

22. We queried whether the Department has the capability to manage the systems integration<sup>73</sup> given its previous approaches had not worked.<sup>74</sup> It agreed that it needs to strengthen its capability. When we asked if it was acquiring people with experience from other complex programmes, it said it was talking to other large programmes such as Crossrail and was looking for new supplier to supplement its skills. Its current contract with Deloitte was due to end and will be replaced in 2023.<sup>75</sup>

23. The Department recognised that the split of responsibilities between its ESN suppliers is suboptimal.<sup>76</sup> The Independent Assurance Panel told us that the complexity had been increased in 2015, when amended contracts had made the Home Office responsible for systems integration, a task it did not have the skills to do.<sup>77</sup> The Department acknowledged that if it looked at ESN through a purely commercial, financial or technical lens, it would not retain its current approach, which it called a ‘recommended’ rather than ‘preferred’ option. It felt that had it been able to start again with a blank sheet of paper it would probably prefer to adopt a prime contractor approach, which would allow it to step back from the systems integration role.<sup>78</sup> But it felt constrained by the need to turn off Airwave off as quickly as possible, which meant it could only make ‘tweaks’ to the programme’s commercial structure.<sup>79</sup>

### Running ESN as a live service

24. The Department’s original objectives for ESN were to save money and bring mobile data to emergency services.<sup>80</sup> It will now take at least 10 years from now for the potential

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70 C&AG’s Report, para 2.11

71 Q 60 (27 March)

72 C&AG’s Report, paras 1.26, 2.11 and Figure 1

73 Q 61 (27 March)

74 C&AG’s Report, paras 2.12–2.13, Figure 8

75 Qq 61–63 27 March

76 C&AG’s Report, para 12

77 Q 55 (27 April)

78 Q 60 (27 March)

79 Q 32 (27 March)

80 C&AG’s Report, para 2.30



savings to recoup the total cost of ESN.<sup>81</sup> The Department said it would not be certain about costs or benefits until it revised the programme's business case, which it expected to do in 2024.<sup>82</sup>

25. Police were concerned that ESN may not prove any cheaper than commercial alternatives.<sup>83</sup> We asked about operational benefits from access to data. The Department acknowledged that it no longer expected ESN to provide any productivity benefits.<sup>84</sup> Police explained that almost all forces use mobile data via commercial tablets, laptops and smartphones, and the benefits from ESN enhancing these with priority access to data were not clear.<sup>85</sup> The fire service said that its services were also using data and had already realised some of the benefits ESN was originally planned to bring. It also warned that, the longer these commercial services were used, the greater the risk that fire services would not agree to replace them with ESN.<sup>86</sup> The ambulance service said that it had needed to redesign systems that were expected to connect to ESN to use commercial mobile connections instead, although it hoped ESN could be introduced in future.<sup>87</sup>

26. Despite these concerns, all three emergency services did still see a continuing case for ESN. For example, the fire service said that there could be benefits from being able to share drone footage of incidents by ESN providing a common platform for such services. It noted that several reports into national incidents have called for better communication and coordination between the three emergency services.<sup>88</sup> The Independent Assurance Panel pointed out that innovations and benefits would only happen after the network was completed, and may require software and an app store.<sup>89</sup> However, the ESN programme no longer expects to provide any apps, other than to enable push-to-talk.<sup>90</sup>

27. The Department has not yet decided who will be responsible for running ESN and has paused work planning the live service operations.<sup>91</sup> The fire service said it had seen limited lack information about how this would work, for example, it was not clear whether Home Office would run ESN as happens with Airwave.<sup>92</sup> We asked whether the prioritisation of ESN communications over the general public risked a reduced public service during an emergency. The Independent Assurance Panel told us that while prioritisation is not an 'on/off' switch, proper network management is needed to ensure the network functions appropriately.<sup>93</sup>

## Avoiding another monopoly supplier

28. In 2015, the Home Office awarded EE a six-year contract to provide the main network infrastructure for ESN. It intended for this contract to be subject to competition in the future, to avoid being locked into a single supplier and to help take advantage of

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81 Qq 30, 53–54 (27 March)

82 Q 31 (27 March)

83 Q 10 (26 April)

84 Q 47 (27 March)

85 [ESN0001](#)

86 Q 4 (26 April)

87 Q 10 (26 April)

88 Q 11 (26 April)

89 Qq 12, 26 (26 April)

90 C&AG's Report, para 2.30

91 C&AG's Report, paras 15, 2.28

92 Q 35 (26 April)

93 Q 15 (26 April)

innovations. As part of the 2018 programme reset, the Department extended EE's contract by three years to December 2024. It currently plans to award EE a new contract, without competition, thereby extending EE's involvement in ESN. Although EE has made progress on the network infrastructure, its work has proceeded slower than expected and was not complete, with six sites unfinished when the NAO reported in March 2022.<sup>94</sup>

29. We asked whether it would have been better to have a consortium of suppliers providing the main network infrastructure, rather than just EE.<sup>95</sup> The Department agreed that it would prefer to be able to take advantage of a range of networks, but it felt that introducing other suppliers now would increase complexity.<sup>96</sup>

30. We asked the Department how it would ensure EE did not obtain a monopoly position as Motorola had done with Airwave. The Department said that to avoid being locked into EE, it would ensure all suppliers complied with telecommunication standards. It said it wanted to return to an open market competition once Airwave was shut down and would study what measures it would need to take.<sup>97</sup> One of the issues that led to the programme being reset in 2018 was the incompatible assumptions made by EE and Motorola about versions of telecommunications standards.<sup>98</sup> The Independent Assurance Panel said that, as well as complying with standards, it was important that the various parts of ESN met emergency services' needs, in order to avoid creating a service that worked but was seen as 'clunky' by those using it.<sup>99</sup>

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94 C&AG's Report, paras 1.19, 2.7, Figure 6

95 Q 106 (27 March)

96 Q 106 (27 March)

97 Q 107 (27 March)

98 [Progress delivering the Emergency Services network](#), Session 2017–2019, HC 2140, para 6

99 Q 57 (26 April)

# Formal minutes

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## Monday 10 July 2023

Members present:

Dame Meg Hillier

Olivia Blake

Dan Carden

Sir Geoffrey Clifton-Brown

Ashley Dalton

Mr Jonathan Djanogly

Mrs Flick Drummond

Peter Grant

Ben Lake

Anne Marie Morris

Sarah Olney

Nick Smith

## The Emergency Services Network

Draft Report (*The Emergency Services Network*), proposed by the Chair, brought up and read.

*Ordered*, That the draft Report be read a second time, paragraph by paragraph.

Paragraphs 1 to 30 read and agreed to.

Summary agreed to.

Introduction agreed to.

Conclusions and recommendations agreed to.

*Resolved*, That the Report be the Sixty-fourth of the Committee to the House.

*Ordered*, That the Chair make the Report to the House.

*Ordered*, That embargoed copies of the Report be made available, in accordance with the provisions of Standing Order No. 134.

## Adjournment

Adjourned till Thursday 13 July at 9.30am.

## Witnesses

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The following witnesses gave evidence. Transcripts can be viewed on the [inquiry publications page](#) of the Committee's website.

### Monday 27 March 2023

**Sir Matthew Rycroft KCMG CBE**, Permanent Secretary, Home Office; **David Kuenssberg**, Director General of Corporate Delivery, Home Office; **Dr John Black**, Programme Director, Home Office; **Simon Parr QPM**, SRO for ESN, Home Office

[Q1-107](#)

### Wednesday 26 April 2023

**Simon Rickets**, Independent Technical Assurance Panel, Home Office; **Ben Norman**, Deputy Chief Fire Officer, Greater Manchester Fire and Rescue Service; **Chris Lucas**, Senior User, NHS Ambulance Radio Programme; **Kier Pritchard**, Chief Constable ESN, National Police Chiefs Council

[Q1-62](#)

## Published written evidence

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The following written evidence was received and can be viewed on the [inquiry publications page](#) of the Committee's website.

ESN numbers are generated by the evidence processing system and so may not be complete.

- 1 National Police Chief's Council ([ESN0001](#))

# List of Reports from the Committee during the current Parliament

All publications from the Committee are available on the [publications page](#) of the Committee's website.

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Number	Title	Reference
1st	Department for Business, Energy & Industrial Strategy Annual Report and Accounts 2020–21	HC 59
2nd	Lessons from implementing IR35 reforms	HC 60
3rd	The future of the Advanced Gas-cooled Reactors	HC 118
4th	Use of evaluation and modelling in government	HC 254
5th	Local economic growth	HC 252
6th	Department of Health and Social Care 2020–21 Annual Report and Accounts	HC 253
7th	Armoured Vehicles: the Ajax programme	HC 259
8th	Financial sustainability of the higher education sector in England	HC 257
9th	Child Maintenance	HC 255
10th	Restoration and Renewal of Parliament	HC 49
11th	The rollout of the COVID-19 vaccine programme in England	HC 258
12th	Management of PPE contracts	HC 260
13th	Secure training centres and secure schools	HC 30
14th	Investigation into the British Steel Pension Scheme	HC 251
15th	The Police Uplift Programme	HC 261
16th	Managing cross-border travel during the COVID-19 pandemic	HC 29
17th	Government's contracts with Randox Laboratories Ltd	HC 28
18th	Government actions to combat waste crime	HC 33
19th	Regulating after EU Exit	HC 32
20th	Whole of Government Accounts 2019–20	HC 31
21st	Transforming electronic monitoring services	HC 34
22nd	Tackling local air quality breaches	HC 37
23rd	Measuring and reporting public sector greenhouse gas emissions	HC 39
24th	Redevelopment of Defra's animal health infrastructure	HC 42
25th	Regulation of energy suppliers	HC 41
26th	The Department for Work and Pensions' Accounts 2021–22 – Fraud and error in the benefits system	HC 44
27th	Evaluating innovation projects in children's social care	HC 38

<b>Number</b>	<b>Title</b>	<b>Reference</b>
28th	Improving the Accounting Officer Assessment process	HC 43
29th	The Affordable Homes Programme since 2015	HC 684
30th	Developing workforce skills for a strong economy	HC 685
31st	Managing central government property	HC 48
32nd	Grassroots participation in sport and physical activity	HC 46
33rd	HMRC performance in 2021–22	HC 686
34th	The Creation of the UK Infrastructure Bank	HC 45
35th	Introducing Integrated Care Systems	HC 47
36th	The Defence digital strategy	HC 727
37th	Support for vulnerable adolescents	HC 730
38th	Managing NHS backlogs and waiting times in England	HC 729
39th	Excess Votes 2021–22	HC 1132
40th	COVID employment support schemes	HC 810
41st	Driving licence backlogs at the DVLA	HC 735
42nd	The Restart Scheme for long-term unemployed people	HC 733
43rd	Progress combatting fraud	HC 40
44th	The Digital Services Tax	HC 732
45th	Department for Business, Energy & Industrial Strategy Annual Report and Accounts 2021–22	HC 1254
46th	BBC Digital	HC 736
47th	Investigation into the UK Passport Office	HC 738
48th	MoD Equipment Plan 2022–2032	HC 731
49th	Managing tax compliance following the pandemic	HC 739
50th	Government Shared Services	HC 734
51st	Tackling Defra’s ageing digital services	HC 737
52nd	Restoration & Renewal of the Palace of Westminster – 2023 Recall	HC 1021
53rd	The performance of UK Security Vetting	HC 994
54th	Alcohol treatment services	HC 1001
55th	Education recovery in schools in England	HC 998
56th	Supporting investment into the UK	HC 996
57th	AEA Technology Pension Case	HC 1005
58th	Energy bills support	HC 1074
59th	Decarbonising the power sector	HC 1003
60th	Timeliness of local auditor reporting	HC 995
61st	Progress on the courts and tribunals reform programme	HC 1002

<b>Number</b>	<b>Title</b>	<b>Reference</b>
62nd	Department of Health and Social Care 2021–22 Annual Report and Accounts	HC 997
63rd	HS2 Euston	HC 1004
1st Special Report	Sixth Annual Report of the Chair of the Committee of Public Accounts	HC 50
2nd Special Report	Seventh Annual Report of the Chair of the Committee of Public Accounts	HC 1055

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4th	COVID-19: Local government finance	HC 239
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7th	Adult Social Care Markets	HC 252
8th	COVID 19: Culture Recovery Fund	HC 340
9th	Fraud and Error	HC 253
10th	Overview of the English rail system	HC 170
11th	Local auditor reporting on local government in England	HC 171
12th	COVID 19: Cost Tracker Update	HC 173
13th	Initial lessons from the government’s response to the COVID-19 pandemic	HC 175
14th	Windrush Compensation Scheme	HC 174
15th	DWP Employment support	HC 177
16th	Principles of effective regulation	HC 176
17th	High Speed 2: Progress at Summer 2021	HC 329
18th	Government’s delivery through arm’s-length bodies	HC 181
19th	Protecting consumers from unsafe products	HC 180
20th	Optimising the defence estate	HC 179
21st	School Funding	HC 183
22nd	Improving the performance of major defence equipment contracts	HC 185
23rd	Test and Trace update	HC 182
24th	Crossrail: A progress update	HC 184

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25th	The Department for Work and Pensions' Accounts 2020–21 – Fraud and error in the benefits system	HC 633
26th	Lessons from Greensill Capital: accreditation to business support schemes	HC 169
27th	Green Homes Grant Voucher Scheme	HC 635
28th	Efficiency in government	HC 636
29th	The National Law Enforcement Data Programme	HC 638
30th	Challenges in implementing digital change	HC 637
31st	Environmental Land Management Scheme	HC 639
32nd	Delivering gigabitcapable broadband	HC 743
33rd	Underpayments of the State Pension	HC 654
34th	Local Government Finance System: Overview and Challenges	HC 646
35th	The pharmacy early payment and salary advance schemes in the NHS	HC 745
36th	EU Exit: UK Border post transition	HC 746
37th	HMRC Performance in 2020–21	HC 641
38th	COVID-19 cost tracker update	HC 640
39th	DWP Employment Support: Kickstart Scheme	HC 655
40th	Excess votes 2020–21: Serious Fraud Office	HC 1099
41st	Achieving Net Zero: Follow up	HC 642
42nd	Financial sustainability of schools in England	HC 650
43rd	Reducing the backlog in criminal courts	HC 643
44th	NHS backlogs and waiting times in England	HC 747
45th	Progress with trade negotiations	HC 993
46th	Government preparedness for the COVID-19 pandemic: lessons for government on risk	HC 952
47th	Academies Sector Annual Report and Accounts 2019/20	HC 994
48th	HMRC's management of tax debt	HC 953
49th	Regulation of private renting	HC 996
50th	Bounce Back Loans Scheme: Follow-up	HC 951
51st	Improving outcomes for women in the criminal justice system	HC 997
52nd	Ministry of Defence Equipment Plan 2021–31	HC 1164
1st Special Report	Fifth Annual Report of the Chair of the Committee of Public Accounts	HC 222



**Session 2019–21**

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2nd	Defence Nuclear Infrastructure	HC 86
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4th	EU Exit: Get ready for Brexit Campaign	HC 131
5th	University technical colleges	HC 87
6th	Excess votes 2018–19	HC 243
7th	Gambling regulation: problem gambling and protecting vulnerable people	HC 134
8th	NHS capital expenditure and financial management	HC 344
9th	Water supply and demand management	HC 378
10th	Defence capability and the Equipment Plan	HC 247
11th	Local authority investment in commercial property	HC 312
12th	Management of tax reliefs	HC 379
13th	Whole of Government Response to COVID-19	HC 404
14th	Readying the NHS and social care for the COVID-19 peak	HC 405
15th	Improving the prison estate	HC 244
16th	Progress in remediating dangerous cladding	HC 406
17th	Immigration enforcement	HC 407
18th	NHS nursing workforce	HC 408
19th	Restoration and renewal of the Palace of Westminster	HC 549
20th	Tackling the tax gap	HC 650
21st	Government support for UK exporters	HC 679
22nd	Digital transformation in the NHS	HC 680
23rd	Delivering carrier strike	HC 684
24th	Selecting towns for the Towns Fund	HC 651
25th	Asylum accommodation and support transformation programme	HC 683
26th	Department of Work and Pensions Accounts 2019–20	HC 681
27th	Covid-19: Supply of ventilators	HC 685
28th	The Nuclear Decommissioning Authority's management of the Magnox contract	HC 653
29th	Whitehall preparations for EU Exit	HC 682
30th	The production and distribution of cash	HC 654
31st	Starter Homes	HC 88
32nd	Specialist Skills in the civil service	HC 686
33rd	Covid-19: Bounce Back Loan Scheme	HC 687

<b>Number</b>	<b>Title</b>	<b>Reference</b>
34th	Covid-19: Support for jobs	HC 920
35th	Improving Broadband	HC 688
36th	HMRC performance 2019–20	HC 690
37th	Whole of Government Accounts 2018–19	HC 655
38th	Managing colleges' financial sustainability	HC 692
39th	Lessons from major projects and programmes	HC 694
40th	Achieving government's long-term environmental goals	HC 927
41st	COVID 19: the free school meals voucher scheme	HC 689
42nd	COVID-19: Government procurement and supply of Personal Protective Equipment	HC 928
43rd	COVID-19: Planning for a vaccine Part 1	HC 930
44th	Excess Votes 2019–20	HC 1205
45th	Managing flood risk	HC 931
46th	Achieving Net Zero	HC 935
47th	COVID-19: Test, track and trace (part 1)	HC 932
48th	Digital Services at the Border	HC 936
49th	COVID-19: housing people sleeping rough	HC 934
50th	Defence Equipment Plan 2020–2030	HC 693
51st	Managing the expiry of PFI contracts	HC 1114
52nd	Key challenges facing the Ministry of Justice	HC 1190
53rd	Covid 19: supporting the vulnerable during lockdown	HC 938
54th	Improving single living accommodation for service personnel	HC 940
55th	Environmental tax measures	HC 937
56th	Industrial Strategy Challenge Fund	HC 941