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**Emergency Services
Mobile Communications
Programme (ESMCP)**

**Fire and Rescue
Authorities Financial
Information and Sign Off
Pack**

Devon and Somerset FRA

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1.0 Introduction

- 1.1 The purpose of this pack is to provide Fire and Rescue Authorities (FRAs) with the information they require to make an informed decision about their participation in the Emergency Services Mobile Communications Programme (ESMCP) which will deliver a new Emergency Services Network (ESN.)
- 1.2 DCLG has committed to provide all reasonable transition funding for FRAs moving on to ESN. This process will begin with the mobilisation phase in spring 2016. As such, before significant funding is provided to FRAs, DCLG requires Chief Fire Officers (or appropriate individuals) to provide them with a signed commitment that they would like to take up the new service (see Annex A.)
- 1.3 The Pack provides summary information about the Programme rationale and its benefits for the fire service from both an operational and financial perspective. In particular this pack:
- Provides an explanation of the Programme's transition and steady states and the financial implications involved
 - Provides an indication about the likely costs for your FRA of the ESN through its steady state up to 2032
 - Highlights where there may be scope for additional efficiencies by FRAs
 - Demonstrates that the potential alternatives to participation in ESMCP carry significant risks for FRAs both from a financial and operational perspective
 - Asks FRAs to provide the Department for Communities and Local Government (DCLG) with a decision about whether your FRA intends to participate in the ESMCP going forward.
- 1.4 DCLG believes that the ESMCP provides the best solution for updating and enhancing the Fire Service's emergency communications system. From a financial perspective it is cheaper overall when compared to Firelink costs, saving the Fire Service some £80m up to 2032. In addition the ESMCP allows Fire and Rescue Services (FRSs) to make further efficiencies by reconfiguring data and connections to suit their specific needs and by deciding on the scale and timing of device refresh. Further savings are likely to be made in the future as the new ESN is linked to commercial providers and as such retenders will take place in a competitive environment rather via a monopoly provider (as is the case at the moment.) Furthermore DCLG will support FRSs with the cost of transition, removing a potentially costly barrier. From an operational perspective DCLG believes the new system will be more interoperable, resilient and will support data functions better than the current system. It will also be better able to respond to innovations in the mobile communications market as it is linked to commercial providers.

2.0 Assumptions

- 2.1 This paper uses a number of assumptions to calculate the annual costs of ESN for your individual FRA. It is important to stress that the figures within this pack are indicative. Whilst we believe that the figures in this pack provide a good representation of the likely costs involved, in reality the final figures for an FRA will depend on a range of local decisions (such as configuration of data and connections and device refresh.)
- 2.2 The assumptions within this pack (such as the timeline for transition and the costs for Airwave) derive from the Programme's Full Business Case. If you would like to discuss these assumptions, please do not hesitate to contact the DCLG Policy Team at chris.hall@communities.gsi.gov.uk.
- 2.3 The figures for devices, connections and vehicle installations and fit-outs have been derived from the As-Is2 survey which the Home Office collected in April 2014. Whilst DCLG believes that this survey gives a good indication of costs, we understand that some changes are likely to occur (or have occurred) before mobilisation begins in 2016. The Programme will undertake a more up to date survey prior during spring 2016.

3.0 ESMCP Background

- 3.1 ESMCP is a cross-government programme to replace the existing mobile communications service for the three emergency services (Firelink for the FRS) with a new commercial system based on 4G.
- 3.2 Overall the objectives of ESMCP are to be:
- **Better** with integrated broadband data services; public service functionality; national coverage and high availability.
 - **Smarter** to be more flexible, to evolve and improve over time, pay only for features required by users.
 - **Cheaper** to address budget pressures, re-competed regularly to leverage market forces.
- 3.3 There are three strategic drivers that are influencing the scope and timing of ESMCP's development. These are that:

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- Current contracts for the three services (provided by Airwave) expire between 2016 and 2020 and cannot readily be extended. As such there will be no Airwave Firelink service from 2020 meaning that now is a good time to procure an alternative system.
- The current Airwave Firelink service is already significantly more expensive than similar public safety systems in Europe and price trends for publically available mobile telephony.
- Users within the three emergency services are increasing requiring broadband data (not just voice communications) to support operational transformation. This cannot be met by current Airwave technologies.

3.4 The intended scope of ESMCP will include 44 police forces, 50 fire and rescue services (including those in Scotland and Wales) and 13 Ambulance Trusts. A range of other civil contingency user organisations will also join ESMCP as second tier users. Overall this means that the system is likely to have approximately 300,000 users.

3.5 FRS transition on to the new ESN is due to begin with the mobilisation phase in 2016 and will be complete by January 2020 by which time all FRSs will be in a steady state. The steady state will last until the end of the financial year 2032 by which point a retendering of the contracts will have taken place.

3.6 DCLG recognises that Fire communications systems continue to be the responsibility of each individual FRA. However central government has a strong interest in ensuring that the country is fully prepared to deal with civil contingency issues. As such the Government believes that it is important to have in place a communications system that enables inter-working across boundaries and between the three emergency services. Furthermore the Government believes it is important to ensure that emergency services communications are robust and resilient, using the latest technology to aid the delivery of a more effective service.

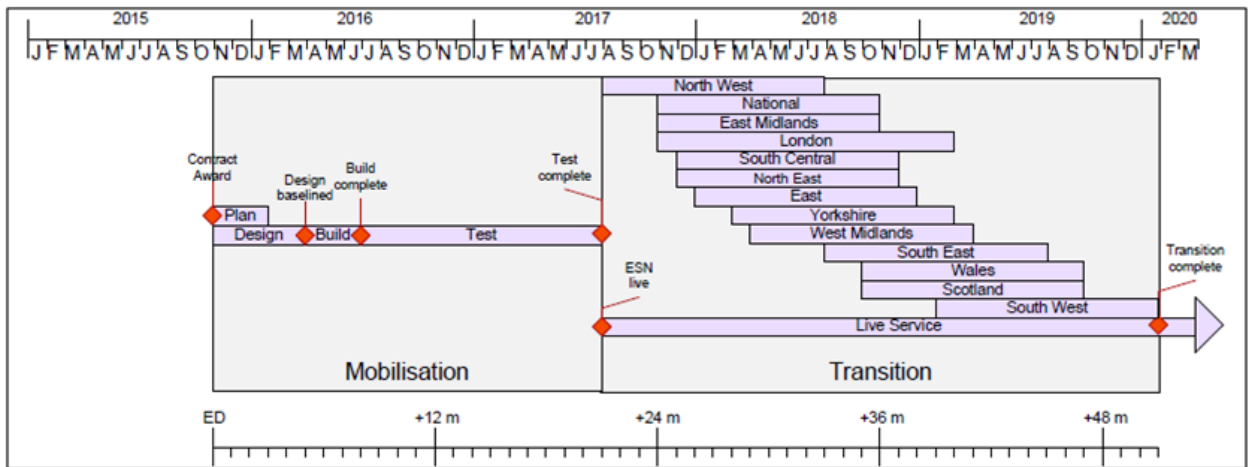
3.7 As such, whilst DCLG is currently not mandating take up of ESMCP, it is strongly recommending that FRAs sign up to the system, both from a financial perspective (the fire service as a whole stands to make significant savings of approximately £80m) but also from an operational perspective.

4.0 The Financial Rationale

4.1 The delivery and realisation of the new Emergency Services Network via ESMCP will take place in two major stages. These will be a transition stage whereby FRs will prepare for and undertake the switch to ESN and the steady state stage whereby FRs will be fully utilising the ESN.

Transition Stage

4.2 The table below provides an indicative timetable regarding how and when the mobilisation and transition process will operate.



4.3 As with many significant change programmes, ESMCP will incur some significant transition costs as Fire Services move from one communications system to another. In order to help achieve a smooth and effective transition, DCLG has made a commitment to support FRAs in the cost of transition. Whilst we are not yet in a position to confirm funding on an individual basis, a total of £50.4m will be made available to FRAs to fund transition.

4.4 Details regarding the individual costs of transition will be provided over the first two quarters of 2016. However as DCLG requires a commitment from FRAs prior to providing transition funding, it was deemed prudent provide the indicative costs at the earliest opportunity.

4.5 During their transition FRAs will continue to pay the costs of Firelink (and receive the associated New Burdens Grant) until the point at which they have completed transition and no longer require a connection to Airwave (except for interworking in instances of mutual aid.) Once an FRS has completed its transition it will then begin paying for the

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ESN service, benefitting from the greater functionality this provides, and in most cases, a lower cost. It is therefore in an FRA's interest to facilitate a timely completion of transition in order to benefit from reduced costs of ESN. There will be no period when an FRA will be paying for both Airwave and ESN.

4.6 DCLG will provide funding for:

4.7 Local Transition Support – DCLG has previously agreed with Fire Customer Group the funding for Local Transition Support. This includes roles such as local project managers, control room managers and training. We would encourage local collaboration within transition regions and would welcome a lead authority model. Grant Payment would be made on an annual basis by Section 31.

4.8 Control Rooms and PSN – Due to the degree of variation in Control Room solutions, as part of the future control room scheme, and therefore the path for upgrade required for ESMCP, it is appreciated that there is not likely to be any simple, one size fits all calculation for splitting transition grant. As such, it is our intention to request bids for control room upgrades, based on quotes received following engagement with suppliers, in the new year with a view to agree funding at the appropriate stage. FRAs and Control Room Partnerships would be expected to make reasonable bids, with a focus on completing all control room upgrades required to deliver ESN functionality by commencement of transition.

4.9 Vehicle Installations – DCLG and the Programme have made an estimate on the anticipated cost for Vehicle Installations. We would propose to fund FRAs (proportionately) on the basis of the number of Fire Appliances. FRAs who intend to collaborate on vehicle installations will then have the flexibility to combine pots or appoint a lead authority.

4.10 Devices – DCLG has committed to fund ESMCP devices, however we also want to encourage flexibility for local decision making within Fire and Rescue Authorities. As such we would seek to provide funds to FRAs for the replacement of existing devices, based on the Programme's calculations. Local FRAs would have the flexibility to purchase from the Device Catalogue at the cost level and in volumes they wish. DCLG will only be providing funding for devices during the transition stage. Individual FRAs will have the flexibility to determine their own device refresh in steady state (although the indicative costs provided in this paper include a full refresh taking place over a five/six year period.)

4.11 Regional Implementation Managers – In addition to the above funding for Local Transition Support the Department will be funding a Regional Implementation Manager for each of the 10 Regions in England. They will be required to coordinate the transition

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of FRS and they will be responsible for monitoring and ensuring the core elements of the programme are delivered locally, but not the Non-Core (Vehicle Fit outs, Devices, Control Room upgrades).

- 4.12 Over the next few months DCLG will put in place a process for receiving bids for Control Room and PSN upgrades, with a view to begin receiving bids in 2016. For the other elements of Transition Funding we would intend to work with the Programme and Delivery Partner to confirm how many vehicle fit-outs and replacement devices (either Handheld or Vehicle) are required.

Steady State Stage

- 4.13 Overall the Programme estimates that ESN will produce at least an £80m saving to English Fire and Rescue Authorities nationally between 2020 and 2032. This indicates a strong value for money case for ESN. Furthermore the vast majority of FRAs will make a saving on the costs they were paying for the Airwave system. As such, DCLG believes that this saving combined with the support for transition costs makes a compelling case for FRA sign up.

- 4.14 However, there are a few FRAs (usually those authorities that have enjoyed generous subsidies for Airwave) who will see their individual costs rise. In most of these cases, FRAs will only see a small rise, however for a few it may be more significant.

- 4.15 There is however scope within the programme for an FRA to make efficiencies which will reduce their individual bill – meeting a long term wish of FRSs which have had fixed-price bills under Firelink. Non-Core costs (i.e. those for connections and data usage) are locally driven. In other words, an FRA will only pay for what they use. As such there may be scope to make savings on data and connection charges by reconfiguring devices to suit the specific needs of a particular fire service. Furthermore, the scale and timing of any device refresh will be up to individual services (the model at 5.0 provides for a full refresh of devices in the steady state, the cost of which would fall to the FRS.)

- 4.16 In order to help those FRAs that will see their individual costs rise, an element of tapering has been included within the modelling/indicative costs for the Core element on a declining basis (75%, 50%, 25%) for the first 3 years of ESN. This will mean that those FRAs affected by higher costs will not see a sudden rise but rather a gradual increase.

5.0 The Indicative Financial Figures for your FRA

Indicative ESN Costs to Devon and Somerset FRA

	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28	28/29	29/30	30/31	31/32
Core	£-	£26,995	£168,436	£173,663	£195,250	£210,268	£214,609	£219,552	£224,598	£229,748	£235,004	£240,368	£245,843	£247,627
Data	£-	£7,986	£48,291	£53,013	£52,841	£52,841	£52,841	£52,841	£52,841	£52,841	£52,841	£52,841	£52,841	£52,841
Devices	£-	£-	£-	£-	£15,131	£34,982	£8,307	£130,602	£97,080	£31,986	£38,623	£4,971	£-	£-
Total	£-	£34,981	£216,727	£226,677	£263,222	£298,091	£275,756	£402,995	£374,519	£314,575	£326,468	£298,180	£298,684	£300,469

Indicative Airwave Costs to Devon and Somerset FRA over same period – [Please note Airwave cannot continue post Dec-2020 at the latest]

	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28	28/29	29/30	30/31	31/32
Airwave	£-	£70,504	£511,150	£521,373	£531,801	£542,437	£553,285	£564,351	£575,638	£587,151	£598,894	£610,872	£623,089	£635,551

Indicative Net Saving/Cost to Devon and Somerset FRA

	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28	28/29	29/30	30/31	31/32
Net Saving / Cost of ESN	£-	£(35,523)	£(294,423)	£(294,696)	£(268,578)	£(244,346)	£(277,529)	£(161,356)	£(201,119)	£(272,576)	£(272,426)	£(312,691)	£(324,405)	£(335,082)

6.0 Issues with Alternatives to ESMCP

6.1 Whilst DCLG is currently not mandating the take up of ESMCP, it is strongly recommending that FRAs sign up to the system both from a financial and operational perspective.

6.2 The Government considered a range of options for updating emergency service communications as part of the Outline Business Case for ESMCP (these are summarised at **Annex B.**) The result of this options analysis was that ESMCP (an enhanced commercial Long-Term Evolution network) provided a compelling case going forward. ESMCP will provide a system that is:

- Robust, interoperable and contains data capabilities
- Smart in that it only charges only for what is used
- Cheaper overall than the existing system
- Contains scope for future efficiencies as it is linked to a commercial system.

6.3 In deciding whether to go ahead with ESMCP, FRAs will need to be aware that maintaining the status quo Airwave system will not be an option. Airwave is due to come to an end in 2019 (with scope for a further one year contractual extension until 31 December 2020) As such a change in communication system will need to take place regardless of whether an FRA decides to sign up to ESMCP or not.

6.4 Furthermore it will be important in making a decision about ESMCP that FRAs which have a formal relationship with other FRAs (such as the sharing of a Control Room) ensure that they have regard to what their partner organisations intentions are and the potential impact that this might have on future working relationships.

6.5 DCLG believes that ESMCP offers the best communications system going forward. As such DCLG will only contribute to transition costs for FRAs moving onto ESMCP as a Tier 1 user. It will not provide any support to FRAs wishing to choose alternative methods of communications.

6.6 The table below highlights a variety of alternatives to ESMCP and an explanation regarding why the Government believes they are not viable when compared to the benefits that ESCMP will bring.

Option	Potential Issues
<p>Do Nothing (Continuation of Airwave)</p>	<ul style="list-style-type: none"> • DCLG’s current contract with Airwave runs out at the end of 2019 (with a possible extension to end of 2020) • As such the Fire Service will need to re-procure a communications service whether or not they are part of ESMCP. • Even if we could continue with Airwave, we would have to incur the higher costs associated with a monopoly provider. • In addition the Airwave system is becoming increasingly outdated – as it is based on voice rather than data communications which are increasingly used by Fire Services.
<p>Procure own 4G Network for your FRA</p>	<ul style="list-style-type: none"> • Likely to be more expensive than joining ESMCP which provides a 4G network and has gained cost efficiencies by negotiating on behalf of a wide range of users. • If provided by an organisation that is different to the ESMCP provider, the network is unlikely to be interoperable with other ESMCP users • The FRA would be responsible for its own procurement and delivery. This risks not having completed the transition to a new system by the time Airwave Firelink contacts end in 2019 or 2020
<p>Become a Tier 2 User within the Programme*</p>	<ul style="list-style-type: none"> • Likely to be more expensive for the FRA over the long term as connection and costs will be higher for Tier 2 users. • There will be no DCLG financial support available for undertaking this option • Will have no influence over Control Rooms going forward • Will need to assess the impact of the relationship with other FRAs with whom they have a formal relationship.
<p>Procure your own Radio (Tetra) System or Revert to Existing Legacy System</p>	<ul style="list-style-type: none"> • There is no guarantee that the procurement and delivery of a new system will be cheaper for an FRA than ESMCP participation • These systems will not be interoperable with other fire services or organisations other using the Emergency Service Network (ESN) • There may be resilience issues if coverage is not as good as the new ESN (which will be at least as good as Airwave)

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- There will be no financial support from DCLG either for transition or steady state
- Broadband provision will be included. This is increasingly being used for fire services and so an alternative solution will need to be found.
- This system will not be future proofed to take advantage of a developing commercial 4G market.
- The impact on formal Relationships with other FRAs that are using ESN will need to be addressed.

* Apart from the 3ES, there are a significant number of government and other public safety users totalling over 300 organisations all with individual ASL contracts, known as sharers. Under the current ESMCP model these organisations will be known as Tier 2 organisations.

7.0 FRA Required Response to DCLG

- 7.1 DCLG will require a formal response from each FRA's Chief Fire Officer regarding whether or not they intend to migrate onto the new Emergency Services Network as part of the ESMCP. This will allow DCLG to have the assurance it needs to be able to distribute the required funding for transition in line with the Programme timescales.
- 7.2 A draft confirmation letter to be signed and returned to DCLG is attached at **Annex A**. In order to ensure that payments are made promptly we would ask that DCLG receive this letter no later than Friday 25th March 2016.

8.0 Next Steps

- 8.1 Between January and March 2016 members of the ESMCP Policy Team within DCLG shall arrange a number of meetings with FRAs around the country to discuss their particular ESMCP figures. If you feel that your FRA would benefit from such a conversation or if you have any specific queries about this pack or the sign off procedure, please contact Chris Hall at chris.hall@communities.gsi.gov.uk.
- 8.2 As noted at paragraph 7.2, DCLG require the signed response letter by Friday 25th March 2016.
- 8.3 Following FRA sign up to ESMCP, DCLG will make the appropriate funding payments via a Section 31 grant (subject to legal/financial approvals), in time for the transition arrangements.

Annex A – Sign Off Emails for DCLG

- DCLG has committed to provide all reasonable transition funding for FRAs moving on to ESN. This will begin with the mobilisation phase in spring 2016. As such, before significant funding is provided, DCLG requires Chief Fire Officers (or appropriate individuals) to provide them with a commitment that they would like to take up the new service.
- If your FRA would like to proceed with ESMCP we would be grateful if your Chief Fire Officer (or appropriate person) could sign, scan and email the statement below to DCLG’s Policy Official at chris.hall@communities.gsi.gov.uk by 25th March 2016.
- Alternatively if your FRA does not wish to sign up to the new network, we would be grateful if you could sign, scan and email the alternative statement below to DCLG at the same email address.

Confirmation of Transition to the Emergency Services Network

I can confirm that Devon and Somerset FRA will transition on to the new Emergency Services Network via the Emergency Services Mobile Communications Programme (ESMCP). I understand that the Department for Communities and Local Government (DCLG) will provide all reasonable transition funding for the Programme between 2016 and 2019.

Signed Date.....
Chief Fire Officer - Devon and Somerset FRA

Rejection of the Emergency Services Network

I can confirm that Devon and Somerset FRA will not transition on to the new Emergency Services Network via the Emergency Services Mobile Communications Programme (ESMCP).

Signed Date.....
Chief Fire Officer - Devon and Somerset FRA

Annex B - Overview of Options for Replacement of

Emergency Services Communications.

Economic Option	Description
Option1 – Do Nothing	Existing Airwave contracts naturally expire. No central involvement in procurement of replacement services.
Option 2– Continue with a TETRA network (Do minimum)	Procure a private TETRA network with public safety voice and narrow-band data augmented by locally-procured operational broadband data services. This requires 400MHz spectrum which is not available until 2020
Option 3 –Build a new private LTE network	Procure a private LTE network with public safety voice and broadband data services. This requires 700MHz spectrum which is unlikely to be available until 2020
Option 4 – Enhanced Commercial LTE Service*	Transition to a commercial LTE network when Airwave contracts expire. Additional procurement of necessary public safety features to enhance the network

*From the ESMCP Outline Business Case – “The cost benefit analysis concludes that Option 4 is the preferred option on the basis that it represents the highest Net Present Value. Option 4 also provides the most non-financial benefits and critically delivers the non-financial benefits of interoperability required to meet the Programme’s objectives”