



LONDON FIRE BRIGADE

Report title

Procurement of New Radios

Report to

Operational Delivery DB
Corporate Services DB
Commissioner's Board
Deputy Mayors Fire and Resilience Board
London Fire Commissioner

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Assistant Commissioner, Operational Policy & Assurance

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Executive Summary

This report discusses the background to the procurement of new four-watt analogue/digital radios to replace those currently used by operational staff at incidents. It recommends the procurement of radios and ancillary equipment through a Crown Commercial Services (CCS) Framework.

If approved, this procurement supports the Delivering Excellence aim of the Transformation Plan by improving communications capability at incidents. This will in turn provide a better and safer working environment for operational staff and an enhanced service to the public.

Recommended decisions

For the London Fire Commissioner

That subject to the approval of the Deputy Mayor, the London Fire Commissioner:

1. approves expenditure of up to £2,150,000¹ to procure new radios, associated equipment, and service/warranty package over a seven year contract, after completing an OJEU compliant procurement exercise under the Crown Commercial Service (CCS) Network Services 2 (RM3808, Lot 11) Framework.
2. delegates authority to the Assistant Director, Technical and Commercial Services, to award a contract to the successful bidder for the provision of new radios, associated equipment and warranties after completion of the tender exercise.

¹ Redact

Introduction and Background

1. All UK Fire and Rescue services use Ultra High Frequency (UHF) radios for communications between operational staff at an incident. Wireless telegraphy licences are issued by the Office of Communications (Ofcom) under Section 8 of the Wireless Telegraphy Act 2006. The Act authorises the licensee to establish and use stations, install or use apparatus for wireless telegraphy, subject to certain terms, provisions and limitations. Fire and rescue services (FRS) pay for a licence to use a set of frequencies in the UHF 450-470MHz band.
2. The LFC currently uses a 4 watt UHF Entel radio which are personal issue for general use at an incident and a 1 watt UHF intrinsically safe (IS) Entel radios for use with Breathing Apparatus (BA) equipment. This BA radio is also known as the BARIE radio.
3. The current radios are models dating from 15 years ago which are coming to the end of their serviceable life and are increasingly incurring greater repair and replacement costs for LFC. New radios are more robust, built to a higher specification and have improved audio performance. The current radios use analogue technology whilst newer radios are capable of operation in digital mode which provides additional features such as text messaging not available in analogue only radios.
4. National Operational Guidance (NOG) is good practice operational guidance developed through the National Fire Chiefs Council (NFCC). NOG has guidance for Fire Rescue Services (FRS) that are looking to replace their fireground radios. It recommends that FRS's procure digital radios that can operate in both analogue and digital modes to ensure interoperability with other FRS and with any legacy analogue networks that may be utilised. These are known as dual mode radios
5. The NOG also provides detail on the standards for IS radios. These standards are derived from Appareils destinés à être utilisés en ATmosphères EXplosibles (ATEX) which contain two directives from the European Commission dealing with equipment for use in potentially explosive atmospheres. In the UK radios which align with these standards are known as ATEX radios.
6. A requirements gathering exercise involving operational staff was undertaken which included a survey, a number of workshops, discussions with other FRS and engagement with radio suppliers. At the same time, the respiratory protective equipment (RPE) replacement project were looking at the options to replace the IS radio used with breathing apparatus (BA) equipment.
7. Subsequently a review of the Specification for Fireground and Breathing Apparatus Radios was undertaken. This recommended that the LFC should:
 - Provide a more appropriate level of IS for all general use fireground radios for both breathing apparatus and fireground operations;
 - Introduce a single specification 4W/IS ATEX radio for all radios;
 - Amalgamate the BA radio and Fireground Radio projects;

- Provide radios via riding position with personal issue retained for senior officers
- Retain a stock of higher rated IS radios for specialist operational use

The Commissioner approved this recommendation in LFC0266 and drafting of the requirements commenced.

8. Information was sought from other FRS's who had recently purchased dual mode radios, with particular focus on how the radios were connected to BA equipment. All FRS's consulted were using a piece of equipment called a Remote Speaker Microphone (RSM) for this purpose with the added benefit that RSM's also improve speech and audio quality. RSM's were added to the LFC specification.
9. Market research identified that there were two radio manufacturers who could supply a radio that met the IS standards that the LFC specified. Therefore, the Crown Commercial Service (CCS) Network Services 2 (RM3808, Lot 11) Framework was utilised as the procurement route as both suppliers are identified within it.
10. A mini-competition has commenced and trials of radios and RSM's with current LFC BA equipment commenced in October 2020 at the Fire Service College, Moreton in the Marsh. Station based evaluations over one month at four fire stations and evaluations at various buildings and locations throughout London are scheduled for January and February 2021. The trials are due to be completed in February 2021. The evaluation is due to be complete and the winning bidder identified in March 2021.

Alternative Options Considered and Consultation

11. The projects to replace the personal issue radios and the radios used with BA were initiated separately and had different requirements based on their intended use.
12. One of the recommendations from the Grenfell Tower Inquiry is to improve incident communications

Grenfell Tower Inquiry: Phase 1 report overview by The Rt Hon Sir Martin Moore-Bick October 2019.

Chapter 33: Recommendations. 11 Equipment 33.21

'Some of the equipment in use by the LFB, in particular the radio equipment, was unreliable or in some cases failed to work at all. I therefore recommend: a. that the LFB urgently take steps to obtain equipment that enables firefighters wearing helmets and breathing apparatus to communicate with the bridgehead effectively, including when operating in high-rise building'

Section 28.130 from the Phase 1 narrative of the Inquiry makes it clear that 'from the earliest stages of the incident the deployment of firefighters inside the tower was plagued by generally ineffective communications'

13. Therefore, the strong case for retaining a level of intrinsic safety whilst delivering a more powerful radio was overwhelming and thus the decision to procure one suitable radio for all tasks at an incident was made.
14. The London Ambulance Service, Metropolitan Police and Transport for London use a number of different radio systems however none use the UHF radios required by LFC. Therefore, there were no opportunities for a collaborative procurement with these partners.
15. The LFC does need to retain a capability in using this type of radio when working at incidents with other FRS's in order to meet our statutory obligation to provide assistance to other fire services. There is also a need to ensure radios are compatible with the hundreds of legacy UHF networks installed throughout London's built environment for example London Underground tunnels, Wembley Stadium and The Shard.
16. Representative bodies have been consulted on the approach and have provided input to the specification and training requirements.

Objectives and Expected Outcomes

17. Procuring a ATEX (intrinsically safe) IIA rated radio with a 4 watt output that is capable of use in both digital and analogue mode means the LFC will have a suitable radio for all tasks at an incident.
18. Higher rated, ATEX IIC radios will also be purchased to cater for those specialist incidents such as sewer rescues etc where a flammable atmosphere could be reasonably expected to be encountered. Due to the higher rating, these will be lower output (1watt) but still have the capability to operate in both digital and analogue mode.
19. Radios will be allocated per riding position on appliances and personal issue to senior officers as is the case in most other fire services.
20. A Remote Speaker Microphone (RSM) will be purchased with the radio to allow a BA communication interface to plug into the system via the industry standard 'nexus connection'. The RSM also provides improved audio quality in noisy environments
21. The provision of a support and maintenance service for the radio's and RSM's will include an annual service, software upgrade and battery check with a no cost replacement of the battery if required to ensure this critical communications equipment is in optimum condition for use at every incident.
22. The support and maintenance service will reduce or remove the need for the current spend on radio equipment required to maintain the existing radios. In addition as LFC will not have to purchase test equipment or new batteries over the contract term further analysis has found this will produce a combined reduction of approximately £350,000¹ in the capital funding requirement .
23. This solution will allow every firefighter to have a radio and every BA wearer to be able to contact each other and more importantly entry control, which addresses recommendations from the Grenfell Inquiry and is supported by our Representative Bodies as it is recognised as improving safety.

Impacts

24. The successful delivery of this project will have the following impacts not just within London but across the fire service and other emergency services nationally due to the collaborative and open approach we have taken to information gathering and sharing and keeping the community abreast of its progress.

Equality Impact

25. The London Fire Commissioner and decision takers are required to have due regard to the Public Sector Equality Duty (s149 of the Equality Act 2010) when taking decisions. This in broad terms involves understanding the potential impact of policy and decisions on different people, taking this into account and then evidencing how decisions were reached.
26. It is important to note that consideration of the Public Sector Equality Duty is not a one-off task. The duty must be fulfilled before taking a decision, at the time of taking a decision, and after the decision has been taken.
27. The protected characteristics are: Age, Disability, Gender reassignment, Pregnancy and maternity, Marriage and civil partnership (but only in respect of the requirements to have due regard to the need to eliminate discrimination), Race (ethnic or national origins, colour or nationality), Religion or belief (including lack of belief), Sex, Sexual orientation.
28. The Public Sector Equality Duty requires us, in the exercise of all our functions (i.e. everything we do), to have due regard to the need to:
 - (a) Eliminate discrimination, harassment and victimisation and other prohibited conduct.
 - (b) Advance equality of opportunity between people who share a relevant protected characteristic and persons who do not share it.
 - (c) Foster good relations between people who share a relevant protected characteristic and persons who do not share it.
29. Having due regard to the need to advance equality of opportunity between persons who share a relevant protected characteristic and persons who do not share it involves having due regard to the need to:
 - (a) remove or minimise disadvantages suffered by persons who share a relevant protected characteristic where those disadvantages are connected to that characteristic;
 - (b) take steps to meet the needs of persons who share a relevant protected characteristic that are different from the needs of persons who do not share it;
 - (c) encourage persons who share a relevant protected characteristic to participate in public life or in any other activity in which participation by such persons is disproportionately low.
30. The steps involved in meeting the needs of disabled persons that are different from the needs of persons who are not disabled include, in particular, steps to take account of disabled persons' disabilities.
31. Having due regard to the need to foster good relations between persons who share a relevant protected characteristic and persons who do not share it involves having due regard to the need to—

- (a) tackle prejudice, and
 - (b) promote understanding.
32. An equalities impact assessment has been carried out for the new radio and a comprehensive evaluation process has commenced with operational staff including all watches at four fire Stations. This is to ensure the widest range of users are included in the assessment of the radios and ancillary equipment.
 33. A survey, that includes questions on the radios functionality and usability is being completed by all operational staff participating in the evaluation. The results from this evaluation will provide 50% of the total marks that will determine the choice of radio.
 34. Consultation will continue with the disability working group, head of learning support and Neurodiversity/Dyslexia support group to ensure the radio is accessible and usable by all potential operational users.

Procurement and Sustainability

35. A procurement was carried out utilising the Crown Commercial Service (CCS) Network Services 2 (RM3808, Lot 11) Framework. An Invitation to Participate was published to the 6 companies listed on the framework. By the deadline for responses, three bids had been received from two companies. There are only two manufacturers in the market that produce a solution that matches our requirements. One company submitted a bid proposing one radio solution, and the other company submitted two bids, proposing a solution from the two radio manufacturers in the market. The evaluation is being carried out in two stages.
 - Stage one is the evaluation of the method statement and tender. The evaluation consists of a number of mandatory pass/fail criteria. The price element is weighted at 25 percent, the quality element is weighted at 15 percent, and sustainability / social value is weighted at 10 percent.
 - Stage two is the practical assessment of the proposed solution and is weighted at 50 percent. This section includes evaluation with breathing apparatus which was carried out at Moreton on Marsh in October. Evaluation by station users and Incident Comms is due to be carried out during January and February 2021.
 - When all of the evaluation has been completed the scores will be collated and the winning bidder identified.
36. During the initial research period collaboration with other FRS's was actively pursued. Cambridgeshire Fire and Rescue Service expressed an interest in collaborating when our specification was for dual mode digital radios and they attended a number of the events held to engage with suppliers. When our requirements changed to intrinsically safe radios, they withdrew their interest in collaborating as this did not meet their operational requirements.
37. The procurement was risk assessed against the Responsible Procurement policy PN696, and relevant evaluation criteria included, in the Invitation to Participate. The prospective bidders are all Small to Medium sized Enterprises, who have an Environmental Management System in place, certified to ISO 14001 standard. The Social Value evaluation criteria questions for bidders cover the disposal of current assets, and their approach to managing the socio-economic and environmental impacts including waste reduction (packaging); circular economy

opportunities (take back, refurbishment, remanufacture); transport emissions and support for disadvantaged groups.

38. Both proposals for the disposal of existing equipment meet the required criteria or better, with evidence of appropriate waste licences provided. The social value proposals of one bidder is considered poor as it provides little clarity or commitment on how it will address the risks they have identified and improve performance in this area outside of their ISO 14,001 system. The other bidder has provided a good statement with clear commitments on many areas, including how they will reduce impacts related to travel, packaging and waste, and support diversity and fair wages
39. Bidders are also required to carry out a Self-Assessment Questionnaire (SAQ) using the Sedex (the supplier ethical data exchange) to identify potential ethical sourcing and modern slavery risks. Where the SAQ identifies a high risk, it will be deemed unacceptable and the contract will not be awarded. Electronics Watch terms and conditions have been included within the contract terms, which provide added support to the Commissioner to monitor the supply chain for ethical sourcing and work with the supplier to address any issues found. Based on company size the bidders are not required to produce and publish Modern Slavery statements.
40. The provision of SEDEX SAQ's are outstanding for both suppliers and are subject to follow up clarification and risk assessment. One of the radios is manufactured in New Zealand with low inherent risk of ethical supply issues whilst the other is manufactured in the Philippines, which has a higher inherent risk. Assurance of manufacturer specific risks (as opposed to generic country level risks) is enhanced with site specific risk assessment via the SAQ, which will provide information specific to the manufacturing site and its practices.

Strategic Drivers

41. Recommendations from the Grenfell Tower Inquiry, the HMICFRS reports and recent reviews in National Operational Guidance are all strategic drivers of this project.
42. This work also supports the Transformation Delivery Plan by:
 - Seizing the future – helping us to drive continuous improvement and innovation
 - Delivering excellence – helping us to improve the effectiveness of our service and better understand risk.

Workforce Impact

43. The representative bodies have been consulted throughout the project and as an employer, bound by the Health and Safety at Work Act 2017. The introduction of an intrinsic safety radio for all uses at an incident helps with reduction of risk in all environments and scenarios.
44. The change from personal issue radios to shared radios for station based staff has been agreed with the representative bodies based on the radios being allocated per riding position of fire appliance rather than on station establishment.

Finance comments

45. This report recommends the purchase of new radios, associated equipment and a service/warranty package at a cost of up to £2,150,000¹. The cost of this purchase will be charged to capital programme. There is currently an approved capital budget of £8,200,000 in 2021/22 for Operational Equipment which incorporates the new radios and the Replacement of Respiratory Protective Equipment (RPE).
46. The purchase of the radios as set out in this report at up to £2,150,000¹ will incur annual capital financing costs of £300,000 for the provision to repay debt (Minimum Revenue Provision) based on a 5 year asset life and £37,500 for interest cost per annum at a forecast rate of 2.5%. The capital financing costs are included within the revenue budgets in the 2021/22 Budget Submission (LFC-0432).
47. The costs for the support and maintenance of the radios and associated equipment will be sourced from and contained within existing revenue budgets. The options being considered are part of the procurement process therefore this cannot be confirmed until the preferred solution is decided

Legal comments

48. Under section 9 of the Policing and Crime Act 2017, the London Fire Commissioner (the "Commissioner") is established as a corporation sole with the Mayor appointing the occupant of that office. Under section 327D of the GLA Act 1999, as amended by the Policing and Crime Act 2017, the Mayor may issue to the Commissioner specific or general directions as to the manner in which the holder of that office is to exercise his or her functions.
49. By direction dated 1 April 2018, the Mayor set out those matters, for which the Commissioner would require the prior approval of either the Mayor or the Deputy Mayor for Fire and Resilience (the "Deputy Mayor").
50. Paragraph (b) of Part 2 of the said direction requires the Commissioner to seek the prior approval of the Deputy Mayor before "[a] commitment to expenditure (capital or revenue) of £150,000 or above as identified in accordance with normal accounting practices...".
51. The Deputy Mayor's approval is accordingly required for the Commissioner to award a contract for new radios, associated equipment and a service/warranty package to the successful bidder, up to a value of £2,150,000¹ after completion of a OJEU compliant procurement exercise.
52. The statutory basis for the actions proposed in this report is provided by section 7 (2)(a) of the Fire and Rescue Services Act 2004, under which the Commissioner must secure the provision of personnel, services and equipment necessary to efficiently meet all normal requirements for firefighting.
53. Under section 2(1) of the Policing and Crime Act 2017, the Commissioner has a duty to keep under consideration whether entering into a collaboration agreement with one or more other relevant emergency services in England could be in the interests of the efficiency or effectiveness of that service and those other services.

54. The General Counsel also notes that the procurement route for the purchase of new radios and associated equipment is in compliance with the Public Contracts Regulations 2015. The Crown Commercial Service have conducted a compliant OJEU procurement in accordance with section 33 of the Public Contracts Regulations 2015 to set up the Crown Commercial Service (CCS) Network Services 2 (RM3808, Lot 11) Framework, from which the Commissioner is able to make a compliant call off.

List of Appendices

Appendix	Title	Protective Marking
1.	LFC 0266 A review of the Specification for Fireground and Breathing Apparatus Radios	None