



LONDON FIRE BRIGADE

Decision title

Introduction to Service of 64m Turntable Ladders

Recommendation by Assistant Commissioner, Operational Policy and Assurance
Decision Number LFC-0393-D

Protective marking: **NOT PROTECTIVELY MARKED**

Publication status: Published in full

Summary

The Brigade's fleet of aerial appliances are approaching the end of their serviceable life and are scheduled to be replaced in the second half of 2020. Three of these aerials will be 64m Turntable Ladders (TLs). Report LFC-0393 provides a recommendation for the crewing of these appliances and additional recommendations to improve the resilience of the wider TL fleet.

Decision

The London Fire Commissioner agrees to:

1. Phase 1 - The creation of the Aerial Support Pump capability,
2. Phase 2 - The 32m TL ridership replicating the 64m fleet and provides a ridership of five driver-operators per watch on all TL stations,
3. Phase 2 – The 32m TL training courses are prioritised when negotiating the Training Delivery Plan,
4. Phase 3 - A supplementary paper will be drafted provided to Strategic Training Oversight Board proposing options for the implementation of on-watch training.

Andy Roe
London Fire Commissioner

This decision was remotely
Date signed on Friday 09 October 2020

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LONDON FIRE BRIGADE

Report title

Introduction to Service of 64m Turntable Ladders

Report to

Operational Delivery DB
Commissioner's Board
London Fire Commissioner

Date

01 July 2020
29 July 2020

Report by

Assistant Commissioner, Operational Policy and Assurance

Report number

LFC-0393

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Summary

The Brigade's fleet of aerial appliances are approaching the end of their serviceable life and are scheduled to be replaced in the second half of 2020. Three of these aerials will be 64m Turntable Ladders (TLs). This report provides a recommendation for the crewing of these appliances and additional recommendations to improve the resilience of the wider TL fleet.

Recommended decision

That the London Fire Commissioner (LFC) agrees to:

1. Phase 1 - The creation of the Aerial Support Pump capability,
2. Phase 2 - The 32m TL ridership replicating the 64m fleet and provides a ridership of five driver-operators per watch on all TL stations,
3. Phase 2 – The 32m TL training courses are prioritised when negotiating the Training Delivery Plan,
4. Phase 3 - A supplementary paper will be drafted provided to Strategic Training Oversight Board proposing options for the implementation of on-watch training.

Background

1. The LFB is due to take delivery of the first of three 64m Turntable Ladders (TLs) in June 2020. LFC-0082 details the background to the selection and procurement process for these vehicles. The locations and rationale for officer ridership is detailed in LFC-0093 (now LFC-0104). The 64m TL locations will be Wimbledon (the first location), Dagenham and Old Kent Road.
2. These aerial appliances will be the largest of their type in the UK and will provide the Brigade with assets that have a vastly increased operational capability due to their extended height and reach. The specification of the vehicles also provides additional operational benefits in a

number of scenarios such as an elevator for multiple rescues and an on board integrated pump.

3. This paper is informed by the crewing and practises of two other European metropolitan fire services that have high-reach aerial appliances in their fleets (Madrid and Istanbul), as well as the particular risks posed by the Greater London built environment. These appliances are unlike any other aerial currently in service in the UK, so whilst the principles of safe work systems are well established, it was necessary to look to other European cities in developing procedures for the 64m TLs.
4. Currently, the number of aerial operator skills per station is three drivers (MDs) per watch with leading firefighters (LFFs) trained as cage operators. It was agreed at the TL Training Stakeholder Group (with agreement at the TL Project Board) that the number of drivers per watch would increase to five, although the current three drivers per watch with LFFs as cage operators is the trigger for the 64m TLs to be initially placed 'on the run'.
5. LFC-0093 now LFC-0104) established that 64m TLs would be mobilised to incidents as the nearest available TL, or on request for the extended height.
6. This report recommends a three-phase approach to increasing skills and providing additional resilience to support 64m and subsequently 32m TLs, and improve the flexibility of TL training. Although there are three phases, much of this activity will run concurrently.

Phase One – Aerial Support Pumps based at 64m TL stations

7. This paper recommends that the LFC agrees to the creation of the Aerial Support Pump attribute at the three 64m TL stations, and associated skills numbers.
8. Following the investigative work carried out in Madrid and Istanbul, a risk assessment for the activities associated with the 64m TLs was developed, and accompanies the operational policy. It identified that the 64m TL can be used to carry out the same tasks as a 32m TL with two operators at lower heights.
9. This will need to be confirmed with further testing once the vehicles are delivered in to London. However, it was also identified that in order to safely and effectively conduct specific extended reach operations (past 32m), it is necessary to have a minimum of three operators. In particular, this relates to use as a water tower at extended height and for the use of the rescue elevator. These operations require a number of concurrent tasks to be undertaken and three operators are required to ensure this is done safely and effectively.
10. For example, utilising the 64m TL as a water tower where water needs to be pumped to greater heights requires a dedicated operator for the Turret, Cage and On-board Pump. Utilising the elevator for rapid rescue (rather than rescue using the cage) requires a dedicated operator for the Turret, Cage and Elevator Operator.
11. Again, the information gathered during this investigative work will need to be confirmed through further testing once the vehicles are in London.

12. The 64m TL is not designed to carry three people. This paper recognises that the majority of incidents do not require the 64m TLs to work beyond 32m TL operating environments and there are driver impracticalities associated with riding with three. For the majority of the time the vehicle will not be used for its extended height capability, and two operators will be sufficient.
13. Therefore, a request from the incident will be made for an Aerial Support Pump when one or both of these tasks is required.
14. There is a balance to be struck when deciding whether to put Aerial Support Pumps on request only, or accompanying 64m TL mobilisations. Mobilising fire appliances introduces the risk of vehicle movements using speed exemptions and if an Aerial Support Pump accompanies 64m TLs on all mobilisations, then it removes fire appliance cover from the associated station for the duration of that incident. In 2018 and 2019, an average of 0.5%¹ of aerial shouts involved rescues from the aerial (fires and special services) and an average of 2.8% of aerial mobilisations were to fires that were not contained to their room of origin² over the same time period. In contrast, 33%³ of Old Kent Road, Dagenham and Wimbledon's shouts in 2018 and 2019 were to primary fires or special services. Therefore the data suggests that fire appliance utilisation is greater than aerials conducting these specific tasks and they should remain available where possible.
15. A pumping appliance would require a minimum of two qualified TL staff (of any rank) for it to be identified as an Aerial Support Pump – one operator to make up the third person, plus one additional skill for resilience. This provides resilience in the crewing at protracted incidents when operators are spending long periods of time in the cage and turret – they will be able to switch out roles. It also recognises that, with only three 64m TLs, there will be a small pool of operators and therefore a need for additional resilience at protracted incidents.
16. As part of the Aerial Replacement Project, the number of aerial driver-operator skills per station is increasing from three to five qualified staff per watch (not including LFFs). Therefore, if pumping appliance establishment levels are maintained, there will be enough skills on pump ladders during normal business to fulfil this capability. Wimbledon, Dagenham and Old Kent Road are currently being prioritised for TL conversion and acquisition courses based on this principle.
17. This change requires an update to StARS Roll Call Boards to ensure Vision recognises the attribute. It is anticipated that this work will be carried within the Information Management team and would mirror Mass Decontamination and Extended Duration Breathing Apparatus (EDBA) support pump solutions, giving the maximum flexibility to allocate two riders to any of the riding positions on a pump or pump ladder.
18. The training requirement for this recommendation has already been established and scheduled as part of the Aerial Replacement project.

¹ IMS data based on people recorded as rescued by aerial appliances 2018-2019 (66 people).

² IMS data from incidents that meet the following criteria: Affecting more than 2 floors (not whole building), external roof only, limited to two floors (not whole building, limited to floor of origin, roof space and other floors, roof space only, whole building, whole roof (including roof space).

³ IMS data based on attendance at primary fires (initial and reinforcement mobilisations) and special services (initial and reinforcement mobilisations) against total mobilisations.

19. An aerial support pump attending on a PDA may be used for other tasks as part of the on-arrival tactics. Whilst this is to be avoided where possible, if a request is then made for an additional support pump, this will be mobilised from the next nearest available location.
20. It is recommended the LFC agrees to the creation of the Aerial Support Pump capability because this represents a new way of crewing Turntable Ladders which has implications for the management of these vehicles at incidents, appliance availability, and the ability to carry out particular tasks at incidents.
21. The intention is for 64m Aerial Support Pumps to go live when the 64m TLs are placed on the run.

Phase Two – Increased ridership at 32m TL stations

22. The initial training plan for 32m TLs is to train three drivers and two LFFs at the eight stations. However, it is recognised that having only three driver-operators per watch is unsustainable, and historically has resulted in a high standby requirement. Three driver-operators does not provide sufficient resilience due to training courses and staff absence. Officer leave also has an impact in this area because a TL driver-operator may act up to fulfil that role and be no longer available to ride the aerial.
23. Standby movements are only one metric to measure the complex area of skills shortages, but they do provide an illustration of the point. In the three year period 2017-20 there has been an annual average of 1,344 standby movements for aerial appliances generated because of skills shortage increasing by 49% in that same period. An indicative cost for this (based on Tier 2 standbys) is an annual cost of £69,660. This excludes indirect standby pre-arranged overtime cost.
24. This paper recommends that the 32m TL ridership replicates the 64m fleet and provides a ridership of five driver-operators per watch on all TL stations. This would be instigated following implementation of the new 32m TL fleet.
25. Achieving this ridership level will improve TL fleet operational deployment for the following reasons:
 - Increased availability of TL operators on the fire ground to rotate tasks.
 - Enables a pumping appliance to be deployed as a TL relief crew.
26. This recommended TL skills level at the eight 32m TL stations represents an increase of 64 driver-operators, increasing the overall skills numbers from 96 to 160 (excluding the 64m TL stations).
27. It would then be possible to identify appliances riding with two TL operators as 32m TL Support Pumps (using a 32m TL Support attribute). In turn, this allows control to identify appliances to send for TL reliefs when requested. In the long term it would also be possible to allocate this attribute to PDAs (such as one of the five appliances dispatched as part of the High Rise PDA).
28. Training an additional eight staff at the eight 32m TL stations will incur 660 Training Units. These will be negotiated from existing Units as part of the Training Delivery Plan in advance of the training year. This paper recommends that these courses are prioritised when negotiating the Training Delivery Plan.

29. It is recommended that this is achieved one year after all eight new TLs have been brought in to service.

Phase Three – On-watch trainers

30. The integration of the 64m TLs and the acquisition of required skills is the priority. This acquisition is delivered by Babcock Training Limited (BTL). A rolling programme of courses to train staff on the 64m TLs commences May 2020.

31. Alongside the delivery of phase one and two recommendations, Ops Policy will work with Training and Professional Development to develop the concept of on-watch trainers for TL operators.

32. This concept is extensively used across UK Fire and Rescue Services. On-watch trainers are required to meet a different standard to final assessors, and it would be necessary to determine a Fit to Train standard. This method of training delivery has a number of advantages for both LFB and BTL.

33. Firstly, it means that the training received prior to final assessment is delivered by watch staff within the usual watch pattern. This offers additional flexibility, but also improves the skills at fire stations and maintains operational experience in instructors.

34. Additionally, this approach enables BTL to provide a shorter, more flexible acquisition course for the vehicle operation and also provide an opportunity for seconded LFB staff to deliver these courses.

35. Following acquisition, candidates would return to their base station where on-watch instructors would deliver operational use training. A final independent assessment would be completed by either BTL or a watch-based approved assessor from another station. The Aerial Replacement Project Team has already begun the work of identifying on-watch 'super-users', and this has proved popular.

36. In the long term, this will provide greater flexibility in training watches. In particular, this would enable delegates to carry out acquisition training at realistic outside venues on their own station ground without incurring the cost associated with booking external venues through BTL. This will raise professionalism and standards, and make the training model agile enough to train up entire watches at aerial stations. It also creates an opportunity during training for crews to assess venues with a view to more intelligence-led mobilising of aerial appliances and PDA assessments.

37. This recommendation has been discussed with BTL and they are supportive of partnering with station-based staff to increase training provision.

38. If this recommendation is agreed in principle, a supplementary paper will be provide to Strategic Training Oversight Board proposing options for its implementation.

Conclusion

This paper recommends the implementation of:

- Aerial Support Pumps at 64m TL stations, with an establishment of five operator-drivers, as well as qualified LFFs.
- Increasing the skills establishment at 32m TL stations to improve flexibility in the aerial capability.
- Creation of on-watch trainers to provide a blended training solution working in collaboration with BTL and supporting the Scott Independent Review of Training.

Finance comments

39. This report provides a recommendation for the crewing of the 32m and 64m turntable ladder appliances. It proposes that the number of staff trained at each turntable ladder station is increased from three driver-operators to five, an increase of 88 across the fleet. This will result in an increased training requirement at those stations but will not affect the establishment or ridership for these appliances. The additional training will be considered as part of the annual training prioritisation to determine the allocation of training units provided through the training contract, and will therefore be contained within the existing training budget. The report notes that current skills shortages result in standby movements estimated at £70k annually. If the recommendations in this report are approved this financial pressure should reduce, and any resulting savings identified will then be considered as part of the budget process.

Workforce comments

40. The workforce are supportive of Brigade initiatives to increase skill numbers at station and introduce Aerial Support Pumps.

Legal comments

41. 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.

42. Section 1 of the Fire and Rescue Services Act 2004 states that the Commissioner is the fire and rescue authority for Greater London.

43. The statutory basis for the actions proposed in this report is provided by:

- (a) section 7 of the Fire and Rescue Services Act 2004, under which the Commissioner must make provision for extinguishing fires and protecting life and property in the event of fire in its area, which includes securing the provision of personnel and equipment and training for personnel.
- (b) Section 11 Fire and Rescue Services Act 2004, which gives Fire and Rescue Authorities the power to take any action considered appropriate, including securing the provision of equipment, in order to enable it to respond to emergency situations (i.e. those which may cause persons to die or be injured or cause harm to the environment).

44. In approving these recommendations the London Fire Commissioner must also ensure compliance with The Health and Safety at Work etc. Act 1974 and subordinate Regulations.

45. Section 2 of the 1974 Act imposes a general duty on the employer to '*ensure, so as is reasonably practicable, the health, safety and welfare at work of all of his employees.*' This general duty extends (amongst other things) to the plant and systems of work, the provision of information, instruction, training and supervision and to the provision and maintenance of a working environment that is, so far as reasonably practicable, without risks to health and adequate as regards facilities and arrangements for welfare at work.
46. Section 3 of the 1974 Act imposes a general duty to '*ensure, so far as is reasonably practicable, that persons not in his employment who may be affected thereby are not thereby exposed to risks to their health or safety.*'

Sustainability implications

47. A Sustainable Development Impact Assessment was completed on 11.06.20. This found that the sustainability implications are small but focused around an increase in journeys for training courses as a result of the increased skill requirement.

Equalities implications

48. 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 exercising our functions and taking decisions
49. 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.
50. 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, and Sexual orientation.
51. 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.
52. A Sustainable Development Impact Assessment was completed on 11.06.20. This found that the sustainability implications are small but focused around an increase in journeys for training courses as a result of the increased skill requirement.
53. 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, in particular, 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.
54. 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.
55. 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, in particular, to the need to—
- (a) tackle prejudice, and
 - (b) promote understanding.
56. An Equality Impact Assessment (EIA) was undertaken on 20.03.20.
57. The impact assessment found that consultation with workings groups concerning training will be ongoing and we will continue to monitor the impact of this proposal on protected characteristic groups.

List of Appendices

Appendix	Title	Protective Marking
1.	None	