

Status of Report: Public

Meeting: Combined Fire Authority

Date: 26 July 2023

Subject: Variable Response Vehicles

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For: Information

Purpose

1. The purpose of the report is to update the Combined Fire Authority (CFA) on the introduction of Variable Response Vehicles.

Recommendation

2. The CFA is requested to note the contents of this report.

Executive Summary

3. This report provides an overview of the decision to implement Variable Response Vehicles (VRVs) within the Leicestershire Fire and Rescue Service, highlighting the objectives, trial period, key evaluation areas, and potential impacts.
4. The introduction of VRVs aims to enhance operational efficiency, resource allocation, and overall service delivery. A 12-month trial period across four selected stations has been planned, allowing for a comprehensive evaluation of the impact of VRVs. Each station will trial the VRV for six months, enabling a thorough assessment in various operational aspects.

Background

5. The decision to implement Variable Response Vehicles (VRV's) was approved by the Combined Fire Authority (CFA) Corporate Governance Committee during its meeting in November 2021, utilising the in-year revenue underspend to purchase a VRV. A second VRV was added to the capital programme in 2022/23.
6. VRV's are a new type of vehicle within the Service. They will prove to be a continued evolution of the existing Tactical Response Vehicles adding new operational capabilities whilst also, if successful, creating and releasing financial efficiencies back into the Service by reducing the existing fleet size as the VRV's will fulfil the operational need that is often filled by two vehicles currently.
7. The introduction of VRVs into the Leicestershire Fire and Rescue Service serves multiple purposes, all aimed at enhancing operational efficiency, resource allocation, and overall improved service delivery.

8. The trial period for the two VRVs will span 12 months across four identified stations and provide an opportunity for a comprehensive evaluation outlined within this report.
9. The extended trial duration allows for a thorough assessment of the impact of VRVs on various operational aspects and provides sufficient time to collect relevant data and feedback. Each station identified will trial the VRV for a period of six months. The comprehensive evaluation will focus on the following key areas:

Appliance Availability

10. The trial period will allow the Service to closely monitor the impact of VRVs on appliance availability at the selected trial stations, in particular within the On Call section. By comparing the availability statistics before and during the trial, the Service can determine the extent to which VRVs contribute to improved availability of operational vehicles.
11. This evaluation will shed light on the effectiveness of VRVs in addressing low appliance availability and ensuring that stations have the necessary resources to respond promptly to incidents supporting the 10-minute response time target.

Resource allocation and crewing flexibility:

12. During the trial, the Service will assess the efficiency and effectiveness of VRVs in optimising resource allocation and crewing levels. By closely monitoring crewing patterns, response capabilities, and deployment strategies, the evaluation will provide insights into how VRVs enhance operational flexibility and support the Service's ability to allocate resources based on incident requirements.
13. The evaluation will be part of the evidence used to inform future decision-making regarding crewing policies and resource distribution across the Service.

Efficiency savings and resource optimisation:

14. The trial period presents an opportunity to evaluate the cost savings and resource optimisation potential of VRVs. By comparing the operational costs associated with running VRVs against traditional pumping appliances, the Service can assess the financial implications and potential benefits of integrating VRVs into the fleet.
15. This evaluation will consider factors such as fuel consumption, maintenance costs, and equipment requirements, providing a comprehensive analysis of the cost-effectiveness of VRVs in comparison to conventional appliances.

Operational performance in challenging environments:

16. The trial period will allow for a detailed evaluation of the operational performance of VRVs in challenging environments. The Service will closely monitor response times, accessibility, and manoeuvrability of VRVs in scenarios such as congested streets, narrow alleys, or areas with limited access.

17. This evaluation aims to determine whether VRVs offer advantages in navigating difficult terrain, improving response times, and enhancing the overall operational effectiveness of the Service in challenging environments.

Added Operational Capabilities – Climate change

18. The addition of VRV's into the Service will also enhance or add operational capabilities into the fleet. This is primarily focused on the challenges and risks posed by climate change and/or extreme weather events.
19. VRV's provide off road and four-wheel drive capabilities, they have significantly higher ground clearance and modified exhaust systems, meaning they can travel on unmade surfaces, clear obstacles and are able to traverse flood waters. This will benefit the Service's capabilities across all potential events including longer hotter summers but also, flooding, and winter conditions.
20. The specification of the vehicles includes an Ultra High Pressure Misting system, this will maximise the on-board water supply in rural conditions, effectively making more efficient use of the water to extinguish some fires. This will be of particular use in rural fires such as fields, trees, hedges and stack fires, particularly when combined with the off-road capabilities.

Stakeholder feedback and satisfaction:

21. Throughout the trial, feedback will be actively sought from Service users, including members of the community, stakeholders, and personnel directly involved in operating the VRVs. The Service will gather feedback regarding the quality of service, perceived improvements or challenges, and overall satisfaction with the VRV responses.
22. This evaluation will provide valuable insights into the impact of VRVs on Service user satisfaction and enable the Service to address any concerns or issues raised during the trial.
23. By conducting a comprehensive evaluation of these key areas, the trial period for VRVs will provide the Leicestershire Fire and Rescue Service with robust data, insights, and stakeholder feedback.
24. This information will form the basis for informed decision-making, future planning, and potential expansion of the VRV program. The comprehensive evaluation will ensure that the introduction of VRVs aligns with the Service's aims of improving operational efficiency, resource allocation, and the delivery of high-quality emergency services to the community.
25. The following stations have been chosen for the VRV trial based on identified needs and strategic considerations in 2 phases:

Phase 1 - Wigston (On Call):

26. This station currently faces low appliance availability, with the On-Call appliance (the second at this station) available for only 34% of the time. Additionally, operational availability is affected when the Command Support

Vehicle is committed at an incident. The introduction of a VRV at this station will help address these issues and enhance overall response capability.

Phase 1 - Market Bosworth (On Call):

27. With a current appliance availability of 64%, Market Bosworth has already conducted successful trials with the Tactical Response Vehicle. The introduction of a VRV will further improve appliance availability and response efficiency.

Phase 2 – Uppingham (On Call):

28. Uppingham station currently experiences low appliance availability, standing at 59%. By introducing a VRV, the station can release a Tactical Response Vehicle and a standard appliance back into service, thereby enhancing availability and optimising resource allocation.

Phase 2 – Central (Whole time)

29. Central station faces a situation where, when the aerial appliance is mobilised, two crew members remain at the station without an appliance to use if required. Additionally, by assessing the response times of a smaller appliance through congested streets in the urban areas, the VRV trial at this station aims to provide valuable insights and improve operational effectiveness.

Images for Comparision

30. Below are three images to aid with visualisation of the differences in vehicle types.
31. Image 1 – This shows a “traditional” Fire engine. This has a minimum crew of four staff and makes up the bulk of the fleet.



32. Image 2 – This shows a Tactical Response Vehicle (TRV). There are currently seven of these vehicles within the fleet. It has a minimum crew of two but can

house a crew of four. These vehicles are due for replacement in the next three-year period.



33. Image 3 – This shows a Variable Response Vehicle. They can be crewed with a crew of two as a minimum but can house a crew of five if available. If mobilised with a crew of four or five this vehicle would be regarded as a traditional pump, if less than four it would be regarded as a TRV (tactical response vehicles).



Report Implications/Impact

Legal (including crime and disorder)

34. The Fire and Rescue Services Act 2004 sets out the core functions of the fire and rescue authorities, including the Leicestershire Fire and Rescue Service. This includes a duty on the Authority to make provision for the purpose of extinguishing fires and protecting life and property in the event of fires as well provision for rescue in the event of road traffic accidents. The legislation requires the Authority to secure the provision of equipment that is necessary to efficiently meet these requirements. The Act's provisions promote public safety, collaboration, resource provision, continuous improvement, and the safety of personnel, all of which align with the objectives and benefits associated with the introduction of VRVs. The Authority is a 'Best Value' Authority under the provisions of the Local Government Act 1999 and this means that there is an obligation to secure continuous improvement having regard to a combination of economy, efficiency and effectiveness and the introduction of VRVs will, if the trial is successful, contribute to this requirement.

Financial (including value for money, benefits and efficiencies)

35. In November 2021, the CGC (Corporate Governance Committee) approved funding of £190,000 from the in year revenue underspend to purchase a VRV. In 2022/23, a further £210,000 was made available from the capital programme to purchase an additional VRV bringing the total budget to £400,000. No further additional costs are anticipated at the current time
36. Cost Savings: The introduction of VRVs can result in cost savings for the Service. VRVs are typically smaller and may consume less fuel compared to traditional pumping appliances. These cost savings can be significant over time and contribute to the Service's financial sustainability.

Risk (including corporate and operational, health and safety and any impact on the continuity of Service delivery)

37. The Health and Safety of personnel operating the VRVs, and the public remains a priority. Compliance with health and safety legislation, including relevant workplace safety regulations, must be ensured. This involves conducting risk assessments, providing appropriate training, and implementing safety protocols to minimise potential hazards and ensure the well-being of all involved.

Staff, Service Users and Stakeholders (including the Equality Impact Assessment)

38. Positive Reputation: The implementation of VRVs can enhance the Service's reputation within the community and among stakeholders. The ability to provide more efficient and effective emergency services using advanced vehicles demonstrates the Service's commitment to public safety and responsiveness.
39. Faster Response Times: The introduction of VRVs can contribute to reduced response times, especially in congested areas or locations with limited access. Quicker response times can lead to more timely and effective emergency

services for the community, potentially saving lives and minimising property damage.

40. Staff and representative body engagement has been undertaken with broadly positive comments at this stage. There is a wide feeling that if successful in their trial period and go on to replace TRV's it is a positive addition to the fleet and an improvement of our current capabilities. A full evaluation and review of staffs impressions will be taken post the trial period, this will also include Equality Impact Assessments.

Environmental

41. Reduced Fuel Consumption and Emissions: VRVs are typically smaller and more fuel-efficient compared to traditional pumping appliances. By utilising VRVs in appropriate situations, the Service can potentially reduce fuel consumption and lower greenhouse gas emissions. This contributes to environmental sustainability and aligns with efforts to combat climate change.

Impact upon "Our Plan" Objectives

42. This report sets out relevant developments and performance achieved by the Service Delivery Directorate in pursuance of the objectives set out in Our Plan.

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