



<b>Meeting</b>	<b>Service Leadership Team</b>	<b>Agenda no.</b>	<b>7i</b>
	<b>Strategic Board</b>		
<b>Meeting Date</b>	<b>17 May 2022</b>		
	<b>08 June 2022</b>		
<b>Report Authors:</b>	<b>Peter L Warner – Fleet Service Engineering manager Karl Edwards – Director of Corporate Services</b>		
<b>Presented By</b>	<b>Karl Edwards – Director of Corporate Services</b>		
<b>Subject</b>	<b>Scheduled Replacement of Pumping Appliances</b>		
<b>Type of Report:</b>	<b>Decision/Information</b>		
<b>Action Point No.</b>	<b>N/A</b>	<b>For Publication</b>	<b>Yes</b>

## RECOMMENDATIONS

Members of SLT are asked to approve the following recommendations:

1. The procurement of 29 pumping appliances over a three-year capital replacement programme utilising the NFCC Emergency Response Vehicles Collaborative Procurement Framework, through a single mini-competition process (see table 2 page). The Framework documents are attached as Appendix 1.

<b>Number of Appliances</b>	<b>Capital Year</b>
13	2023/24
8	2024/25
8	2025/26

2. Member of SLT are asked to note that 7 of the first batch of appliances which were due for replacement in 22/23, is not achievable due to the current global position and elongated delivery times. Therefore, the recommendation reflects the consolidation of 22/23 and 23/24 appliances (13) into the first batch of the three-year plan.

## EXECUTIVE SUMMARY

It is recognised that the global supply chain of goods has been impacted by both the Pandemic and Brexit conditions and as such we are experiencing extended lead in times across main key areas, which presents a risk to our future Strategic planning.

However in recognition of this challenge it is important that we organisationally start to look further ahead than we may have done previously and ensure that our Strategic plans take this into account to mitigate our future risks.

Our Strategic approach to this sits in line with the replacement policy set out in the approved Vehicle and Equipment Asset Management Strategy 2021 – 2026 Revision 8. (VEAMS).(Appendix 2). These new appliances will replace time served vehicles which have reached their designated age of 15+ years as detailed in the strategy.

Whilst this paper is specifically focused on gaining approval to proceed with the procurement of replacement appliances over a three-year period it should also be acknowledged that there is an overall fleet replacement programme that identifies the replacement dates of all our vehicles, from cars, vans through to specialist vehicles such as Arial Ladder Platforms (ALP's), Water Bowsers, Hose Layers etc. The table below sets out the vehicle types and the identified year of replacement.

A further paper will be presented to SLT members that outlines a more specific programme of vehicles replacements and the anticipated costs. It will equally consider the environmental needs of moving to hybrid and electric vehicles, however this requires more detailed analysis and planning.

For the purposes of this paper to approve pumping appliance replacement over a three year period, it should be acknowledged that from the early research undertaken, it is unlikely that there will be a significant change in the electric/hybrid capabilities of vehicles that are classified under the Heavy Goods Vehicle (HGV) bracket. ECFRS recently reviewed an Electric concept fire appliance, however the total cost was four times that of a current appliance, the pumping technology still required a diesel generator and the charge time for the appliances was in excess of 12 hours. Technology is advancing in this area, but it is not anticipated that this would adversely affect the decision to continue with the procurement of current appliances over the next three years.

The table 1 below provides the unit quantity by asset type of planned replacements up until 2029/30.

Table 1

Asset Replacement by Quantity Per Year	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30
<b>B113 -Vehicles</b>							
Aerial Ladder Platforms	-	-	4	-	-	-	-
Appliances (Pumping)	13	8	8	-	-	-	7
Incident Command units	-	2	-	-	-	-	-
Light Vehicles	6	19	14	8	6	16	6
Off Road Vehicles	4	-	-	4	4	-	4
Officers Cars (Principal Officers)	-	-	1	2	-	-	1
Specialist Rescue Vehicles	-	-	-	-	2	-	-
Light Vans	4	13	14	16	1	11	4
Community Wheels	-	-	-	-	-	-	-
Ladders	5	-	-	18	21	6	-
Hoses for ALPS	-	-	-	-	-	-	-
Driver Training Vehicle Replacement	-	-	-	-	-	-	-
Hose layer replacement	1	-	-	-	-	-	-
Forklifts	-	3	2	-	-	-	-
Boats and trailers	-	-	-	-	-	-	-
Ramps	-	-	-	-	-	-	-
Welfare Unit	-	-	-	-	-	-	-
Animal Rescue Unit	-	1	-	-	-	-	-
Foam units - hooklift	-	3	-	-	-	-	-
Water Bowsers	-	-	-	2	-	-	-

## **BACKGROUND**

The provision of up-to-date assets and equipment, incorporating the latest technology and safety features, supports the Fire & Rescue Plan 2019-2024 in improving efficiency, reducing risk, and ensuring that we deliver the best fire service to the public of Essex.

These replacements are in accordance with the current agreed Vehicle and Equipment Asset Management Strategy (VEAMS) 2021 – 2026 (Appendix 2) and the scheduled dates for the three batches of appliances is also within the period covered by the VEAMS.

The recommendation to procure 3 batches of appliances in a single procurement exercise is made with an awareness of the following considerations and issues:-

- ✓ The current global market pressures resulting in long lead-times for new products, with lead times for chassis, from point of order now being quoted at more than a year.
- ✓ Improved phasing of funding in relation to the capital replacement programme, as lead times are not expected to improve in the near future, thus ordering in advance will allow for improved planning of capital funding.
- ✓ The improved phasing of workloads for the key stake holder departments of Operations, Training, Procurement and Fleet Services, as there are several key and high value fleet assets due for replacement over years 24/25 to 27/28 (see table above) for which significant resources in terms of the workloads and planning will be required from these key stake holder teams. Having the pumping appliances already in the 'pipe-line' by that stage will significantly ease those workloads.
- ✓ Years 26/27 through to 28/29 currently have no scheduled replacements of pumping appliances, which will mean that this period can be used to assess the future needs of the Service in relation to the environmental needs of de-carbonisation and whether alternative fuels or operating methods can be adopted to help eliminate or reduce the emissions from our commercial vehicles. It is anticipated that Large Goods Vehicles (LGV's) with alternative power sources will need to be phased in, 2030 onwards with the government target on removing emissions from LGV diesel engines by 2050.

## **OPTIONS AND ANALYSIS**

There are several benefits to looking to acquire multiple years appliances in a single mini competition tendering exercise, not least those mentioned above in the background section.

In addition, it is anticipated that with larger numbers of vehicles within the contract the service will be able to achieve a volume discount in a competitive market. The resources required to undertake a mini competition for a single year's appliances will be the same as that for the three years in terms of the procurement and specification, therefore the work would not need to be repeated for years two and three (subject to advances in technology altering specifications of equipment stowage etc).

The impact of not replacing the appliances would result in a reduced reliability of vehicles being used for front line fire and rescue response activities. These assets would become increasingly more expensive to maintain and would incur increased downtime as parts become more difficult to obtain or become obsolete.

The Fire fleet is often the first thing the public of Essex see of the Service when responding. The ongoing investment in renewal of the fleet assets greatly improves the maintaining of trust and confidence to the public of Essex.

The alternative to this is to move the whole program on a year is not recommended as it would mean that all appliances within this procurement would be over their intended life cycle at the time of replacement.

## **RISKS AND MITIGATIONS**

The Vehicle and Equipment Asset Management Strategy 2021 – 26 (Appendix 2) details the Service's replacement schedule aligned to the current agreed life cycle for vehicles and equipment. Failure to procure appliances in line with this strategy could result in the Service not being able to meet the replacement schedule.

Due to the lead time for the procurement, build and delivery of these vehicles, a decision to not agree the recommendations will result in the Service not being able to meet the life cycle agreed by the Service. This has the potential to create further maintenance costs and difficulty sourcing parts for older vehicles, in addition to the Service not being able to make the best use of the technology and safety available on new appliances compared to those that are 15 years old.

As an example, the new appliances will be designed to meet the requirements of "clean cab" policy which contributes towards the "No Time to Lose Campaign" as the Breathing Apparatus (BA) sets will no longer be housed within the can of the vehicle.

## **LINKS TO FIRE AND RESCUE PLAN**

The provision of up-to-date assets and equipment, incorporating the latest technology and safety features, supports the ethos of the Fire plan 2019-2024 in improving efficiency, reducing risk, and ensuring that ECFRS provides the best service to the public of Essex.

## **FINANCIAL IMPLICATIONS**

Based on the previous iteration of appliance specifications and the current market knowledge it is estimated that the unit cost of a replacement appliance will be £245,000. However, due to the uncertainties within the marketplace at this time it would be prudent to plan for a contingency of a further 7.5% in line with current inflation figures.

The table at Appendix A is an extract of the current capital replacement program showing the schedule for appliances. Figures and titles highlighted in amber show the pumping appliance profile and those cells highlighted in grey indicate where focus needs to be provided to the specialist appliances replacement programme.

*Note 1, The replacement of Aerial ladder Platforms (25/26), Foam Units and Incident Control units (24/25) and other specialist appliances have been shown for information. The Director of Corporate Services and the Fleet Services Engineering Manager are engaging with stake holder departments to enable resource planning to meet the required inputs, in relation to the overall replacement schedule over the next few years as indicated in the background information above.*

*Note 2, Expenditure against Appliances in 22/23 relates to the remaining commitment of in build appliances from 21/22.*

*Note 3, The figures within the plan are the estimated figures for replacement based on the current vehicles, changes in the marketplace, specification requirements of the assets and the needs of the Service may therefore vary this plan and costings over time. It is therefore the Appliances (pumping) line, which is under consideration for the purposes of this report.*

**Table 2**

	<b>Asset Life</b>	<b>Forecast 2022/23</b>	<b>Forecast 2023/24</b>	<b>Forecast 2024/25</b>	<b>Forecast 2025/26</b>	<b>Forecast 2026/27</b>	<b>Forecast 2027/28</b>	<b>Forecast 2028/29</b>
<b>B113 -Vehicles</b>								
Aerial Ladder Platforms	15	-	0	0	1,200,000	-	-	-
Appliances (Pumping)	15	1,022,942	3,185,000	1,960,000	2,050,000	-	-	-
Incident Command units	6	-	0	400,000	0	-	-	-
Light Vehicles	6	480,000	180,000	390,000	303,000	186,000	126,000	480,000
Off Road Vehicles	6	-	120,000	0	0	120,000	128,000	-
Officers Cars (Principal Officers)	4	80,000	80,000	0	40,000	80,000	-	-
Specialist Rescue Vehicles	6	100,000	0	0	0	-	140,000	-
Light Vans	6	181,800	160,000	352,000	453,000	380,000	35,000	228,000
Community Wheels	12	-	0	0	0	-	-	-
Ladders	12	10,500	0	0	0	49,750	50,250	28,500
Hoses for ALPS	8	-	0	0	0	-	-	-
Driver Training Vehicle Replacement	12	-	0	0	0	-	-	-
Hose layer replacement	15	-	200,000	0	0	-	-	-
Forklifts	12	-	0	0	0	-	-	-
Boats and trailers	12	-	0	0	0	-	-	-
Ramps	12	-	0	0	0	-	-	-
Welfare Unit	15	-	0	0	0	-	-	-
Animal Rescue Unit	15	-	0	260,000	0	-	-	-
Foam units - hooklift	6	-	0	390,000	0	-	-	-
Water Bowsers	15	-	0	0	0	500,000	-	-
					0			
<b>Total B113 -Vehicles</b>		<b>1,875,242</b>	<b>3,208,375</b>	<b>3,766,700</b>	<b>4,000,700</b>	<b>1,315,750</b>	<b>479,250</b>	<b>736,500</b>

## **LEGAL IMPLICATIONS**

The Service has a duty of care and a legal obligation to ensure that its fleet of vehicles are compliant with applicable road traffic legislation and this investment supports that aim.

Procurement through the collaborative purchasing framework set up through the NFCC is in line with the current procurement regulations.

## **STAFFING IMPLICATIONS**

There are no adverse implications to this investment. The investment will allow crews to benefit from the more up to date safety features which come with modern vehicles and operational end users will continue to be engaged with in respect to specification of internal and external appliance requirements.

There will be a need for driver awareness and crew familiarisation with the new assets to enable the service to obtain the maximum benefit from this investment.

## **EQUALITY AND DIVERSITY IMPLICATIONS**

Consideration has been given to whether individuals with protected characteristics will be disadvantaged as a consequence of the actions being taken. Due regard has also been given to whether there is impact on each of the following protected groups as defined within the Equality Act 2010:

Race	N	Religion or belief	N
Sex	N	Gender reassignment	N
Age	N	Pregnancy & maternity	N
Disability	N	Marriage and Civil Partnership	N
Sexual orientation	N		

The Core Code of Ethics Fire Standard has been fully considered and incorporated into the proposals outlined in this paper.

All appliances are built in accordance with the EN 1846 standard for fire fighting vehicles and part of this requirement is to meet needs of a diverse work force for example, manual handling assessments and air suspension to lower the vehicle for removal of the main rescue ladder.

## **HEALTH AND SAFETY IMPLICATIONS**

The newer appliances will be equipped with the current electronic safety features available for this type of vehicle and its operation.

There is an end user requirement that the breathing apparatus is no longer made available within the cabs in line with the “No Time To lose” campaign.

## **CONSULTATION AND ENGAGEMENT**

The specification of the appliances prior to procurement will be in agreement with the operations department and there will be engagement with representative bodies and Health and Safety Representatives to ensure that all requirements are being taken into consideration during any design phase.

## **FUTURE PLANS**

As previously mentioned, there are longer-term strategic considerations to be taken into account with regards to decarbonisation and therefore it is important that we start to plan all future fleet replacements with this factor in mind.

A wider and more specific paper will be presented to SLT in due course regarding the overall fleet replacement programme which will also feed into the future Community Risk Management Plan (CRMP)

## **LIST OF BACKGROUND PAPERS AND APPENDICES**

None