



## Emergency Response Vehicles- Type B Pumping Appliance (Fire Engines)

**Subject:** Procurement Report  
**Date:** 8<sup>th</sup> December 2017  
**Reference:** HWFRS/17 (C002387)

---

### 1. Background

Hereford and Worcester Fire & Rescue Service (HWFRS) Fleet Strategy 2016-2021 identifies a replacement programme for all Service vehicles this links to the Service's core strategy of "providing and maintaining the right fleet, tools and equipment to ensure our staff can do their jobs effectively".

See **Appendix 1** Fleet Strategy 2016-2021 for full strategy.

HWFRS operate 41, front line rescue appliances (large fire engines), as well as 11 additional large fire engines for training, Young Firefighters and fleet reserves. These fire engines have been provided by several different body builders with a number of different chassis cabs over the last circa 20 years.

Most recently (since 2005) nearly all large fire engines have been built on a Scania chassis by E1 bodybuilders.

### 2. Service Review

Following the review of our current fleet provision and engagement with service delivery via the Fleet Equipment Steering Group (FESG) the user need for larger rescue pumps carrying 3,000ltrs of water was identified due to geographically rural areas, and feedback from operational debriefs. Maximising the water capacity carried on the vehicles will enhance the initial fire fighting capacity however it is important that the vehicles continue to operate within 90% of the Permissible Gross Vehicle Weight (GVW).

It is anticipated that the operating GVW will be approximately 16 tons, the maximum should be 18 tons.

The option for a national collaborative procurement was explored however due to the difference in the identified individual Fire Services requirements in relation to Gross Vehicle Weight (GVW), the option to work to a standardised specification was not viable.

As part HWFRS review and finalising the process the following documents were agreed.

#### Finalising of Tender Documents

1. Invitation to Tender **Appendix 2**
2. Schedule 1- Evaluation Criteria **Appendix 3**
3. Schedule 2- Specification **Appendix 4**
4. Schedule 3- Questionnaire **Appendix 5**
5. Schedule 4- Pricing Schedule **Appendix 6**

The specification was agreed by the fleet manager and service delivery representatives and included the following headings:-

### Technical Merit and Quality (50%)

- Technical Chassis (30%)
    - Technical- Power Train
    - Technical- Driver and Crew Cab
  - Technical- Body Construction and Design (25%)
    - Equipment and Stowage
  - Electrical Systems (10%)
  - Fire Engineering (30%)
  - Paint and Conspicuity Marking (5%)
- 
- After Sales Support (Pass/Fail)
  - Documentation (Pass/Fail)
  - Whole Life Cycle Management (Information Only)
  - Training (5%)
  - Warranty (10%)
  - Standards, Legislation and Regulation (Requirement)
  - Rescue Appliance Equipment Inventory (Requirement)
  - Costed Options (Requirement to be included within the Pricing Schedule)

The Authority require a 1 year contract for the supply and delivery of 5 Type B Pumping Appliances (Fire Engines), with the option of a further 24 months maybe taken in periods on 12 months.

The Authority requires 18 of the following supplied in 3 batches

- 5 x Type B Pumping Appliances (order placed 2017/18)
- 7 x Type B Pumping Appliances (order placed 2018/19) Option
- 6 x Type B Pumping Appliances (order placed 2019/20) Option

### **3. Procurement**

The Tender for the Emergency Response Vehicles- Type B Pumping Appliances was advertised on 15<sup>th</sup> August 2017, with a closing date for applications on 25<sup>th</sup> September 2017.

This was undertaken as a mini competition through Lot 3 of the National Framework Agreement for UK Fire and Rescue Emergency Response Vehicle (DS183-15); run by Devon and Somerset Fire and Rescue Service.

Lot 3 - Super Rescue Pumping Appliances, over 15 tonnes GVW

- Angloco
- Emergency One (UK) Ltd
- John Dennis Coachbuilders Ltd
- Rosenbauer UK Ltd
- W H Bence Coachworks Ltd

Lot 3 was chosen due to the anticipated GVW.

As part of the tender process HWFRS required the companies tendering to provide alternatives chassis providers, and therefore requested suppliers offer 2 vehicles that would best meet the Service's requirements.

See **Appendix 4** Schedule 2 Specification for full requirements.

#### 4. Evaluation Stage

##### Evaluation Stages

- Stage 1- Evaluated Price (35%)
- Stage 2- Evaluated structured response to questions; Technical & Quality (50%), Customer Support (15%) and Delivery (Pass/Fail)
- Stage 3- No amplification/clarification requested

Evaluation questions were based on the following overarching criteria and weighted scores:

Award Criteria	Weightings
Price	35%
Delivery	Pass/Fail
Technical Merit and Quality (Meeting Specification)	50
Customer Support:	
Training	5%
Warranty	10%
Ongoing Costs	Information Only

Only 2 bids were received from the suppliers listed below.

##### Suppliers

1. Emergency One (UK) Ltd
2. Rosenbauer UK Ltd

##### **Stage 1- Price (35%)**

A full cost evaluation was carried out on both of the suppliers returned pricing schedules based on the initial contract period (year 1).

Rosenbauer UK Ltd provided the lowest chassis cost based on Volvo and Scania Chassis however the total vehicle price, in particular the costs to complete Fire Engineering for stages 2 and 3 were higher, than the successful bidders.

##### **Stage 2- Technical & Quality (50%), Training (5%), Warranty (10%), Delivery (Pass/Fail)**

##### Technical & Quality, Training and Warranty

The suppliers tenders submissions were reviewed against the above criteria and specification (**Appendix 3-5**) with the evaluation panel consisting of Fleet Manager and Service Delivery representatives, agreeing, through consensus, an overall score for each question.

##### Delivery (Pass/Fail)

Each of the suppliers confirmed with supporting evidence that they were able to meet our delivery requirement of delivering each batch of vehicles ordered within a maximum timeframe of 12 months from the order date.

The below table summaries the weighted scores achieved by each of the three suppliers

Question	Emergency One (UK) Ltd SCANIA	Emergency One (UK) Ltd VOLVO	Rosenbauer UK Ltd VOLVO	Rosenbauer UK Ltd SCANIA
Price 35%	34.46%	35%	30.21%	28.23%

Delivery (Pass/Fail)	PASS	PASS	PASS	PASS
Technical Merit & Quality (50%)	40.50%	37%	37.50%	37.50%
Customer Support: Training (5%) Warranty (10%)	8% 4%	8% 4%	8% 4%	8% 4%
<b>Total score</b>	<b>86.96%</b>	<b>84.50%</b>	<b>79.71%</b>	<b>77.73</b>

The table below summarises the key findings as part of the evaluation:

Supplier	Pros	Cons
Emergency One (UK) Ltd SCANIA	<ul style="list-style-type: none"> <li>The vehicle offered is the same as existing vehicles in service. This larger engine offers 25% more horsepower and torque than the Volvo offering.</li> <li>There is no additional vehicle maintenance training for workshop based staff</li> <li>Additional manufactures vehicle parts required to be kept in stores will be to a minimum.</li> </ul>	<ul style="list-style-type: none"> <li>Higher cost bid on <u>Chassis</u></li> </ul>
Emergency One (UK) Ltd VOLVO	<ul style="list-style-type: none"> <li>The Volvo is in use by many other FRS, allowing for collaboration opportunities in the future. But due to the smaller engine offering this is not deemed as suitable as the Scania engine for the Authorities rural areas with steeper inclines.</li> </ul>	<ul style="list-style-type: none"> <li>The smaller engine offers 25% lower in hp and torque, this offers the Authority concerns regarding under powering on the more hilly train of Herefordshire.</li> <li>There will be additional vehicle maintenance training for workshop based staff.</li> <li>There will be additional manufactures vehicle parts required to be kept in stores.</li> <li>Drivers will require enhanced familiarisation training on the new vehicle chassis. There will be limitations on the amount of training a driver can undertake on differing vehicle types, and where a fire station</li> </ul>

		<p>has multiple fire engines it is not desirable to have multiple differing types in one location, hence a new Volvo chassis may have limitations on which fire stations it can be used on.</p>
<p>Rosenbauer UK Ltd VOLVO</p>	<ul style="list-style-type: none"> <li>• Lower cost bid <u>Chassis</u></li> </ul> <p>The Volvo is in use by many other FRS, allowing for collaboration opportunities in the future. But due to the smaller engine offering this is not deemed as suitable as the Scania engine for the Authorities rural areas with steeper inclines.</p>	<ul style="list-style-type: none"> <li>• The small compact 7.7 litre engine offered by Volvo has a high power figure of 350 hp but the torque produced by the engine is 1400Nm, this is the same as our present Scania vehicles and 200Nm lower than the 320hp offering from Scania. The concern is that the vehicle will not perform as required on the more hilly train of Herefordshire.</li> <li>• There will be additional vehicle maintenance training for workshop based staff.</li> <li>• There will be additional manufactures vehicle parts required to be kept in stores.</li> <li>• Drivers will require enhanced familiarisation training on the new vehicle chassis. There will be limitations on the amount of training a driver can undertake on differing vehicle types, and where a fire station has multiple fire engines it is not desirable to have multiple differing types in one location, hence a new Volvo chassis may have limitations on which fire stations it can be used on.</li> <li>• Total vehicle Price, in particular the costs to complete Fire Engineering for stages 2 and 3 were higher, than the successful bidders.</li> </ul>
<p>Rosenbauer UK Ltd SCANIA</p>	<ul style="list-style-type: none"> <li>• Lowest cost bid on <u>Chassis</u></li> <li>• Rosenbauer was offering its innovative type body</li> </ul>	<ul style="list-style-type: none"> <li>• Total vehicle Price, in particular the costs to complete Fire Engineering for stages 2 and 3</li> </ul>

	<p>structure that incorporates the “fire fighter crew cab”. This new structure gives additional space for Fire Fighters and their kit and equipment within the crew area. With its innovative “stair case” Fire Fighters are able to disembark from the vehicle front ward allowing for faster response times. The shorter and higher body makes navigation around rural and urban streets easier</p>	<p>were higher, than the successful bidders.</p> <ul style="list-style-type: none"> <li>• The vehicle chassis cab offered is the New Day cab Scania at 18 tons GVW. Recent pictures of the cab have been released but as the dimensions and cost are still estimated this leave uncertainty for the Authority at this time.</li> <li>• Their would need to be a review of working practices/policy in managing careful access to equipment stored at high level via the fold down steps on the sides of vehicle.</li> </ul>
--	---	---

## 5. Recommended Decision

Emergency One (Scania) are appointed for the Emergency Response Vehicles- Type B Pumping Appliances (Fire Engines).

Contract Value would be £1,240,960 year 1 based on 5 Pumping Appliances. This is made up by three stages

- Stage One; Chassis Cab £110,105 per vehicle
- Stage Two; Fire Engine Build £28,530 per vehicle
- Stage Three: Vehicle Sign Off £104,452 per vehicle
- Costed Options; £5,105 per vehicle

The Authority requires 18 of the following supplied in 3 batches

- 5 x Type B Pumping Appliances (order placed 2017/18)
- 7 x Type B Pumping Appliances (order placed 2018/19) Option
- 6 x Type B Pumping Appliances (order placed 2019/20) Option

Report updated December 2018; to include CAF requirement

## 6. Savings Achieved

HWFRS last purchased Fire Engines in 2015. This was done in two separate phases.

Phase one; 5x Scania Chassis at £537,250

Phase two: Body Build (Emergency One UK Ltd) at a total of £642,500; per vehicle £128,500

The 2017/18 purchase price is higher than that paid in 2015, but the following needs to be factored into this purchase price; annual increases in line with the Consumer Price Index (CPI) and the increased fluctuation cost of Euro to the Pound.

So based on the above factors the following figure has been calculated

Year	2015	2018
------	------	------

Cost of x5 Chassis	£537,250	£550,525
£ to Euro rate	0.806492	0.876654
Sub Total	£537250/0.806492= £666,156.64	£550525/0.876654= £627,984.36
*CPI Index rate 2015-2018	£1.08	N/A
Sub Total	(£666,156.64*£1.08)= £719,449.17	N/A
Euro to £	£719449.17*0.806492= £580,230	627984.36*0.876654= £550,525
<b>Total</b>	<b>£580,230</b>	<b>£550,525</b>
<b>Savings</b>		<b>£29,705</b> (£5,941 per vehicle)

\*CPI in 2018 / CPI in 2015 \* 2015 CBP Value = 2018 GBP Value  
1096.59148/1020\*£1=1.08

The Authority also made non cashable savings due to using the National Framework and not having to run a full tender process.

(Approx cost; own procurement cost process estimated at 10 days worth of effort at £150 per day. Use of framework resulted in 4 days at £150 per day therefore a 'non cashable' savings of £900 can be demonstrated (saved 6 days at £150 per day= £900)

## 7. Full Audit trail (including Specification/Scoring matrix)

<http://sharepoint1/sites/Procurement/Contracts/Fleet/HWFRS17%20Emergency%20Response%20Vehicles/Forms/AllItems.aspx?RootFolder=%2Fsites%2FProcurement%2FContracts%2FFleet%2FHWFRS17%20Emergency%20Response%20Vehicles%2FE1%20Scania&FolderCTID=0x01200064899D2702D6A0499B1D05BA8CE9ED83&View={40745FA4-8DC8-4F0A-A363-CA048AA3145B}>

<b>Appendix 1-</b> Fleet Strategy 2016-2011	 Fleet Strategy 2016 final.docx
<b>Appendix 2-</b> Invitation To Tender	 Emergency Response Vehicle Inv
<b>Appendix 3-</b> Evaluation Criteria	 Appendix 1 - Evaluation Criteria HV
<b>Appendix 4-</b> Specification	 Appendix 2 HWFA 3000 ltr Rescue Appli

<b>Appendix 5- Questionnaire</b>	 Appendix 3 Questionnaire HWFA.
<b>Appendix 6- Pricing Schedule</b>	 Appendix 4 HWFA Pricing Schedule Mar :
<b>CAFS Requirement</b>	 Organisational Specification CAFS v1