HM Fire Service Inspectorate

Inspection of the Scottish Fire and Rescue Service's Management of its Fleet and Equipment Function

Integrity, Objectivity, and Fairness.

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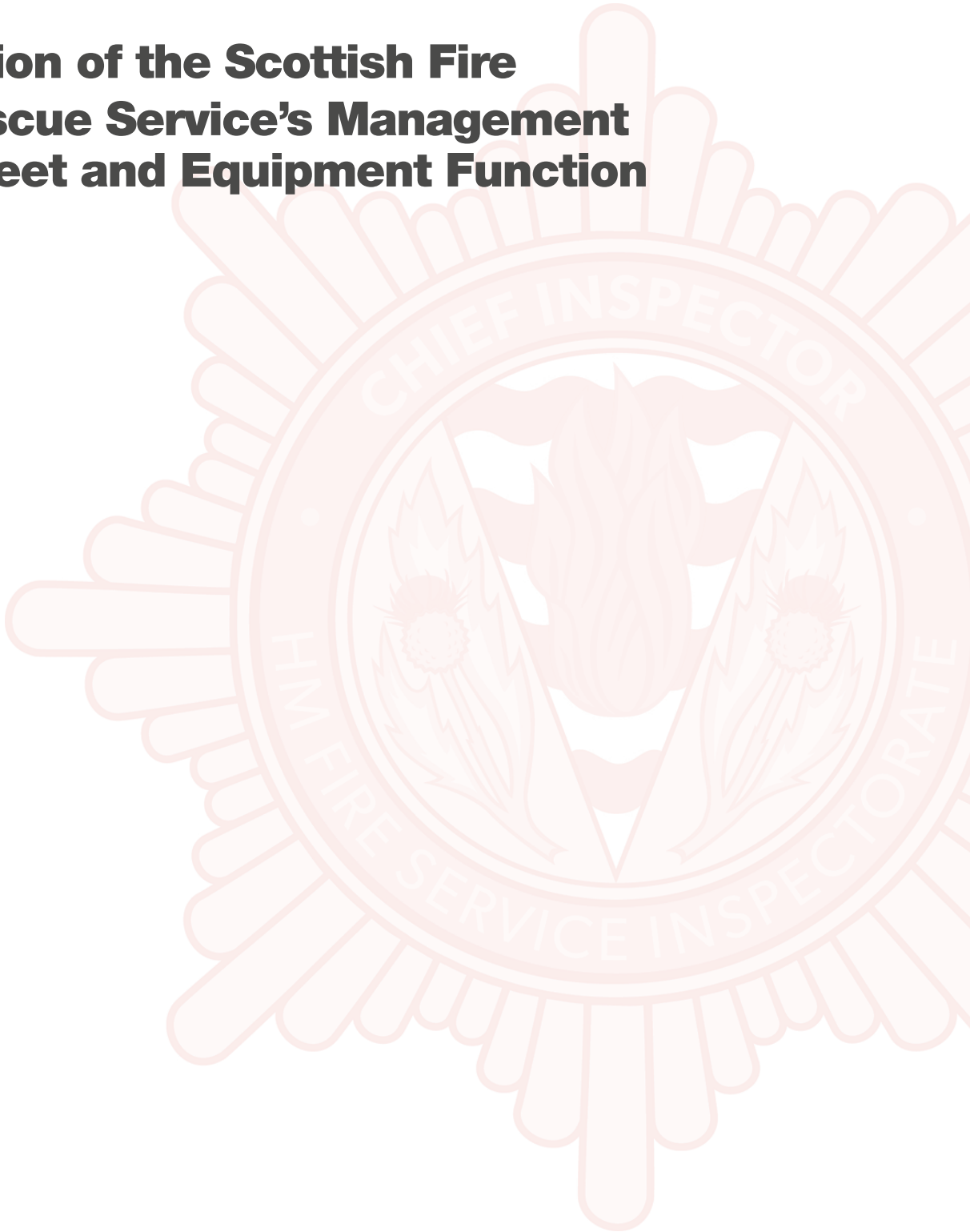

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Acknowledgements

We are grateful to the Scottish Fire and Rescue Service (SFRS) Strategic Leadership Team (SLT), members of the SFRS Procurement, managers and staff within the Fleet Function, representatives from Response and Resilience (R&R), Service Delivery (SD), Training and Employee Development (TED), Research and Development (R&D), Health Safety and Wellbeing (HS&W) and those other members of staff who provided us with information and contributed constructively to interviews.

We are also grateful to the representatives from Dingbro, Emergency One, Freight Transport Association (FTA), Lava's Garage, MAN Trucks UK, Scania, Civica (Tranman) and Volvo who gave up their valuable time to contribute to this review.

The Inspection team members were:

Simon Routh-Jones QFSM – Chief Inspector

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A quality assurance process helped us by challenging a draft of the report. Quality assurance was carried out by Assistant Inspectors, Brian McKenzie and Andrew Thomas who had no previous participation in the process.

All the members of the inspection team contributed to the development of this report and the quality assurance provided a professional challenge to the contents, assumptions and conclusions made. However, the Chief Inspector takes sole responsibility for the report, its contents and conclusions.

Our report reflects the circumstance at the time of our visits and interviews which were undertaken during January to November 2018. The SFRS is continuing to change and evolve, consequently material changes may have occurred since the writing of this report.

Laid before the Scottish Parliament by HM Chief Inspector of the Scottish Fire and Rescue Service under section 43C(5) of the Fire (Scotland) Act 2005 SG/2019/68

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Contents

1_Introduction and background

This thematic inspection looks at the operation of the Scottish Fire and Rescue Service (SFRS's) Fleet Management and Equipment Function and the way that the Service delivers its automotive and engineering responsibilities throughout Scotland.

The Fleet Function was inspected by the SFRS internal audit in 2014. We consider the audit report and comment on the progress of its findings later in the report.

Since its formation in 2013, the SFRS has been subject to continual change and review, it has the constant challenge of transforming whilst maintaining business as usual to the communities of Scotland. Relevant to our report, this transformation includes migration from eight legacy service workshop and stores facilities to four Asset Resource Centres (ARC) encompassing both stores and workshop facilities located in: the Glasgow area (facilities at Cowcaddens and Hamilton will be amalgamated at a new West ARC); Edinburgh (Newbridge); Dundee and Inverness. (During our inspection, the existing Inverness ARC was reclassified to become a main ARC, from previously being a satellite of Dundee, as the SFRS recognised the need to maintain a robust facility to cover the Highland and Islands area. A deputy manager has been appointed to manage this centre).

Like other public services, the SFRS is required to recognise and implement revenue savings and justify its capital spending allocation. The Fleet Function is heavily dependent on staff, specialist equipment and facilities to maintain a quality, credible service. This presents an ongoing challenge and senior management and staff are commended for maintaining the level of service throughout a period of change and financial constraint.

The migration of eight service centres into four has brought significant challenges in respect of managing a large diverse fleet of varying age and condition; a vast and varied specialist equipment portfolio; the relocation of equipment; and varying staff terms and conditions. This has been accompanied by a reduction in staff numbers and loss of expertise in some locations.

At the time of the creation of the SFRS in April 2013, national statistics published a report on 24 February 2015 that stated the SFRS inherited a total of 620 operational vehicles (broadly speaking fire appliances) and a further 895 non-operational vehicles. However, a degree of caution has to be exercised around the initial data. As the national statistics advised at the time, prior to the creation of the SFRS, each of the eight Fire and Rescue Services (FRSs) recorded their vehicles and equipment or "appliances" data separately. The separate records held by each of the eight FRSs in previous years allowed for some variation in how the data was categorised therefore vehicle figures for 2013-14 should be treated with caution due to the challenges involved in collating robust figures from numerous inherited systems. These figures included both owned and leased vehicles.

Once the SFRS was established, an interim recording system was used to provide a central record of this data in advance of a robust national data management system being implemented at a later date.

As well as inheriting varying systems to manage data relating to fleet, and various types and makes of vehicles, the SFRS inherited a fleet which had been maintained to differing quality standards and at different time intervals. As a consequence of the concerns regarding the safety of some of these inherited vehicles, the SFRS immediately removed from service and replaced a number of appliances which it deemed as un-roadworthy.

As the SFRS highlight in its Long-Term Financial Strategy 2017-27, and latterly Audit Scotland went on to report in May 2018[1], the SFRS inherited a significant backlog of capital spending to maintain its fixed assets, including fleet, to a minimum satisfactory condition. The SFRS state that during its first four years it invested approximately £94 million in its asset base which included vehicles.

In its report, Audit Scotland referenced that the SFRS has a draft high-level asset management strategy (2015-19), we explore this later in our report. The report went on to recommend that the SFRS agree a long-term strategy for asset management and a medium-term asset management plan by December 2018. To date the high level strategy remains a draft document.

It should be noted that the SFRS are on a generational journey to shape its delivery to face the perceived challenges of the future. It is moving through difficult phases of its growth, including amalgamation, modernisation and now progressing into transformation. We recognise the challenges of bringing eight fleet services into one and are cognisant of these whilst undertaking this inspection.

Figure 1: Workshop Image – SFRS Corporate Communications

1 http://www.audit-scotland.gov.uk/uploads/docs/report/2018/nr_180531_fire_rescue.pdf

2_About the inspection

Her Majesty's Fire Service Inspectorate in Scotland (HMFSI) is a body that operates within, but independently of, the Scottish Government. Inspectors have the scrutiny powers specified in section 43B of the Fire (Scotland) Act 2005 (the 2005 Act). These include inquiring into the state and efficiency of the SFRS, its compliance with Best Value, and the manner in which it is carrying out its functions.

This inspection is conducted under the powers conferred on the Chief Inspector under sections 43B and 43C of the 2005 Act and was initiated by the Chief Inspector on his own volition.

HMFSI Inspectors may, in carrying out our inspections, assess whether the SFRS is complying with its duty to secure Best Value and continuous improvement. If necessary, we can be directed by Scottish Ministers to look into anything relating to the SFRS as Ministers consider appropriate.

We also have an established role in providing professional advice and guidance on the emergency response, legislation and education in relation to the FRS in Scotland.

Our powers give latitude to investigate areas we consider necessary or expedient for the purposes of, or in connection with, the carrying out of our functions:

- The SFRS must provide us with such assistance and co-operation as we may require to enable us to carry out our functions.
- When we publish a Report, the SFRS must also have regard to what we have found and take such measures, if any, as it thinks fit.
- Where our Report identifies that the SFRS is not efficient or effective (or Best Value not secured), or will, unless remedial measures are taken, cease to be efficient or effective, Scottish Ministers may direct the Scottish Fire and Rescue Service to take such measures as may be required. The SFRS must comply with any direction given.

We work with other inspectorates and agencies across the public sector and co-ordinate our activities to reduce the burden of inspection and avoid unnecessary duplication.

We aim to add value and strengthen public confidence in the SFRS and do this through independent scrutiny and evidence-led reporting about what we find. Where we make recommendations in a report, we will follow them up to assess the level of progress. We will identify good practice that can be applied across Scotland.

Our approach is to support the SFRS to deliver services that are high quality, continually improving, effective and responsive to local and national needs.

The terms of reference for this inspection were consulted upon and agreed with parties that the Chief Inspector deemed relevant.

The intention of this report is to set out the facts and then to present the Chief Inspector's independent view of the situation and where appropriate make recommendations to the Service for adoption in the future.

2.1_Methodology

Whilst undertaking this inspection, the methodology we use follows the same guidelines as those carried within the Local Area Inspections and provides a structure to our inspection which is risk-based, proportionate and focusses on improvement.

This inspection commenced with a desktop review of the SFRS's provided data policies, procedures and information. We undertook face-to-face interviews with the Director of Finance and Contractual Services, Head of Asset Management, the SFRS staff who have responsibility within procurement, staff responsible for the management and maintenance of the fleet, end users, and relevant stakeholders such as vehicle and spare parts suppliers. We also carried out site visits.

The aim of our inspection is to assess: the effectiveness and efficiency of the governance; procurement; management; delivery of service; maintenance and disposal of fleet across the Service and in particular:

- Design and Implementation of the Vehicle Management Strategy
- The consideration of the content of the overall package in the procurement of vehicles – (it will not cover the reasons of choice or disposition of vehicles, as this is a Service Delivery responsibility under the direction of the Chief Officer (CO)).
- The role and operation of the workshop function including:
  - health, safety and wellbeing
  - fleet management software
  - vehicle maintenance
  - vehicle movements
  - equipment issues
- The end user experience

In writing this report, it is structured to tie in closely to the four key areas listed above and adopts a structure where the findings in the report follow those headings.

The areas which are 'out of scope' for this Review are:

- The requirement and disposition of vehicles
- Appliance equipment and small gear – except for vehicle specific equipment. e.g. ladders.
- Personal protective equipment (PPE)
- Fuel management

There are occasions where our observations could be reported against more than one of the headings. Our aim is to ensure that our observations and text are allocated in the most appropriate place or places to give a comprehensive understanding of our findings. Our approach is to insert text into the most relevant and appropriate heading, however there are occasions when it is appropriate to repeat our observations against more than one heading.

During this inspection we looked at a broad range of matters relevant to the delivery of the Fleet Management and its Function within the SFRS, including any issues arising from our local area inspection work carried out across the SFRS. In our report we give an opinion on the manner in which the SFRS is carrying out this particular function.

We visited the four ARCs, together with as many Fire Stations and Service Support locations as we deemed necessary. We also spoke to managers and a range of uniformed and non-uniformed staff. We looked at the premises, vehicles and equipment, and viewed a sample of records to enable us to understand the way in which business within the area is conducted. In that way we aim to cross-reference the SFRS's written plans, policies and procedures and what we were told about the Function by the SFRS managers, with our own observations and discussions with local staff.

This inspection however is not a comprehensive in-depth audit, albeit it is sufficiently detailed in order for HMFSI to give a professional judgement on the activity and suitability of the Fleet Function, and provide comment and recommendations where appropriate. The SFRS itself has a programme of internal audits which involve a detailed look at its Strategic Functions, and we do not want to duplicate that work, although we do take these into consideration whilst carrying out our inspections. The sampling methodology that we adopt is not guaranteed to identify all potential areas for improvement or good practice; we intend that it is a proportionate activity that provides an overview of the Function, comparable with other internal reviews that are carried out.

Our report is the product of empirical evidence from our local area inspections, our direct thematic observations and interviews with strategic and function specific managers, along with other SFRS staff. It is reflective of the circumstance at the time of our visits undertaken from January to November 2018.

Whilst our inspection is not an in-depth audit of all aspects of the management of its fleet within the SFRS, it has established to the Chief Inspector's satisfaction the facts needed to draw conclusions and make recommendations where appropriate.

During the inspection, HMFSI provided feedback to key SFRS staff including workshop managers, the Scottish fleet manager, and other appropriate groups chaired by the SFRS, so that significant emerging issues and themes could be acted upon at an early opportunity.

Figure 2: Areas within Review

3_Our findings

3.1_Vehicle management strategy

The SFRS Fleet Function has undergone a process of streamlining and modernisation and is still moving towards its end state after merging legacy service provision across Scotland. This has not been without challenge due to the age, variety and serviceability of vehicles, plant and equipment, coupled with the diverse geographical landscape. On initial assessment, some assets inherited by the SFRS were proven to be not fit for service causing early problems in providing safe, usable vehicles and equipment for frontline service.

From the findings published in the SFRS internal audit in 2014, we find clear progress in relation to country wide third party assurance of vehicle maintenance, driver license and vehicle daily checks. However, we consider that there is little progress in addressing some of the other areas highlighted in the internal audit report, particularly around such areas as electronic fleet management recording, and completion of maintenance paperwork sign-offs.

Given the importance of fleet in the ability of the SFRS to provide a robust and effective service, there is a requirement for a long-term strategic vision in respect of the whole Fleet and Equipment Function and its impact on frontline firefighters and the communities they serve. This vision needs to be synchronised with Service Transformation and have the ability to meet the future challenges acknowledged in the SFRS Strategic Plan 2016–19[2]. There is a need for a long-term financial commitment which can be evidenced through strategic planning for not only the provision and maintenance of assets but the training required in their use and the asset management system for their effective monitoring and control. This aspiration is proving difficult due to the requirement to work within the parameters of an annual budgeting cycle which inhibits long-term financial and project management.

The SFRS has a draft Asset Management Strategy[3] covering its complete portfolio of assets held. A report by Audit Scotland[4] stated that "The SFRS has a draft high-level asset management strategy (2015-19). It still needs to develop a long-term asset management strategy to reflect its vision for transformation and support this with a refreshed medium-term strategy". The draft strategy says:

> *"We will invest in technology to ensure that we can effectively collect, collate and analyse our asset performance data to support the decision making process regarding the utilisation of our assets across the organisation. This value-focused approach will be fully integrated into corporate financial performance systems ensuring that the financial implications of any strategic decisions are considered at the very early planning stages."*

The Service claims to have introduced a standard approach to managing its extensive portfolio of assets. But this is not entirely what we found when conducting our fieldwork. The Service only partially meets its own aspirations in many areas concerning fleet and operational equipment and practices vary between areas.

2 https://www.firescotland.gov.uk/media/1005163/scottish_fire_and_rescue_service_strategic_plan_2016_19.pdf

3 The SFRS draft Asset Management Strategy 2015 – 2019 v3.0

4 Scottish Fire and Rescue Service: an update May 31 2018

Our findings in this area indicate that the technology employed to track the full life cycle and lifetime costs of assets is not up-to-date, poorly understood and used to varying degrees of success across the country. It does not interface with the SFRS financial software used (Technology One), therefore no accurate utilisation or lifetime costs can be ascertained. Further to this, the record keeping associated with the testing regime is, in part, a paper-based system for operational equipment assets. This means that the assets cannot be nationally monitored, tracked or rotated to ensure maximum longevity and Best Value. The equipment manager therefore finds it challenging to monitor and control all assets to comply with legislative requirements for scheduled maintenance and testing, although we are assured that all assets are compliant. We are informed that the SFRS, in acknowledgement of this area of need, are investing in upgraded technology to better fit their specific requirements.

There is good evidence that every significant asset-based project is now brought before an Asset Management Liaison Board (AMLB). Board membership comprises all stakeholder departments at a strategic level, and it provides a forum where concept and project direction are conceived and ultimately approved. This indicates a strong culture of risk control at a strategic level, however it is unclear how input and control then cascades down within stakeholder departments. We found evidence of workstreams dropping into departmental silos which in some cases inhibited joined up working, leading to confusion and cross purpose in some areas. The AMLB has established a number of sub groups working at a practical enabling level which have alleviated issues and improved cohesive tasking. We found during our fieldwork that project concept was principally driven by R&R with not enough overall engagement with relevant stakeholders and in particular the R&D group. This links into concern that a workstream has not been commissioned at this level which would research equality impacts of new vehicles and equipment and we would encourage the Service to look at this as soon as possible.

The SFRS has embarked upon a modernisation programme for its fleet, which has seen significant capital investment from the Scottish Government in both its red (operational vehicles) and support fleet (pool cars and vans), which is both praised and welcomed by staff. There is good progress in the provision of state-of-the-art vehicles for specialist attributes such as rescue from water and height. The SFRS is also working to enhance its response to significant national risks such as severe weather and marauding terrorist attacks (MTA) with provision of specialist vehicles and equipment.

However, approximately one third of the SFRS's frontline vehicles are older, and in some cases considerably older, than the stated "vehicle replacement cycles" published in the SFRS Transport Strategy[5]. It is unclear at this point, how this strategy can be successfully implemented without substantial capital investment.

Workshop managers are of the view that capital investment over the last five years has been insufficient. Vehicles which should have been retired some time ago are kept in operational service. We have been advised that due to this, maintenance costs and overtime to maintain the serviceability of ageing assets have vastly increased, the older appliances are more prone to breakdown and as a result the SFRS is falling behind on programmed maintenance schedules.

5 Scottish Fire and Rescue Service Transport Strategy June 2017

Managers also expressed concern over the number and quality of spare vehicles available to allow for replacement during breakdown or maintenance. This issue was also consistently raised by frontline staff. We are advised that nationally the SFRS has more spare appliances available but there is now greater demand placed upon the spare fleet in its entirety. This is in some cases symptomatic of differing types of appliance being required to be maintained and available for specific area use. There are challenges in this area which will be alleviated, over time, by the introduction of new vehicles and the cascading of appliances into the fleet, some of which would be expected to augment the spare fleet.

The fleet of vehicles used by driver training personnel is ageing and lacks resilience, this is described as being reflective of the fleet age profile in general; the newest vehicle being registered in 2011. We are advised that these ageing vehicles are prone to breakdown with the effect of disrupting driver training courses and familiarisation drives affecting the amount of trained drivers available to the Service.

There is also evidence of vehicles being purchased and delivered, but lying unused for substantial periods of time before going into operational service – as reported in our 2018 Local Area Inspection of Glasgow[6] – thereby failing to reduce the pressure on an ageing fleet. This includes water rescue vehicles that lay unused for three to four months due to, amongst other issues, a lack of Airwave radio equipment. No interim alternative method of communication was considered which could have made these assets operational. Further, we consider this raises questions as to the suitability of the project management employed in vehicle acquisition. This should be looked at with the view to adopting a robust process, as set out in the Scottish Public Finance Manual[7] which will encourage a seamless transition from production line to operational service.

A major cause of new pumps lying unused is the introduction, to all Large Goods Vehicles (LGVs), of an inbuilt Electronic Stability Programme (ESP). ESP constantly monitors the ride dynamics of the vehicle being driven and intervenes automatically using the engine management and braking systems if the vehicle appears to be in danger of tipping over or skidding. The introduction of ESP to all new SFRS LGVs has necessitated the need for drivers to be trained in the event that it actuates. This training programme was initially unforeseen and has taken time to programme into the driver training planner causing long delays in vehicles becoming operational and adding further pressure to an already overburdened driver training section. Scania reported that they ran an ESP event at the outset of the technology but the SFRS did not send a representative, this almost certainly contributed to a delay in the resolution of associated issues.

With new driving technology inherent within new vehicles and the requirement for driving culture to change as a result, it would be prudent for drivers to experience this technology at the earliest evolution of their training and so would promote the need for a more modern and robust fleet for use by driver training. We are advised of recent progress in this area with driver training now having access to new vehicles for a finite period of time in order to carry out training before entering operational service. We feel that this improves the issue but does not negate the need for the driver training fleet to be modernised.

6 https://www2.gov.scot/about/public-bodies/HMFSI/Reports-Publications

7 https://www.gov.scot/publications/scottish-public-finance-manual/

The process of introducing new vehicle assets has met with varying degrees of success. During our interviews we found universal praise for the investment in fleet and equipment however there is evidence that key staff were not engaged in the process, with local knowledge and technical expertise not being sought whilst planning and engineering technical solutions. We would encourage the SFRS to more widely canvass end users opinion, through further promotion on its intranet and seeking engagement from staff.

It is noted as good practice that the SFRS carried out a thorough review of its high reach appliance provision[8] and there is widespread agreement on the Service's decision to phase out Combined Aerial Rescue Pumps (CARP) in favour of dedicated high reach appliances in the long-term. It is also acknowledged that the rationalisation of high reach appliances is expected to realise significant savings with an overall projected reduction from 26 to 17 vehicles improving operating costs and new vehicles increasing overall fleet reliability. The modelling used demonstrates equitable coverage across Scotland with only a 2% reduction in high reach provision within 30 minutes and little difference in the 60 minute provision being projected.

Figure 3: High Reach Vehicles Image – SFRS Corporate Communications

8 R&R Review of High Reach Appliance Provision in the SFRS 24/10/2017

There is evidence that a significant project to provide smaller more versatile vehicles for the rural environment (Rapid Response Unit (RRU) project)[9], has advanced far quicker than we and observers within the SFRS consider prudent. At the concept stage, the project seems to have been shrouded in a certain amount of secrecy with very little interdepartmental engagement. Some senior officers felt frustrated that there wasn't a good level of integrated thinking as they were involved in the process of implementing strategic decisions but had not been involved in the strategic decision making process itself. Late changes to vehicle design and equipment have resulted in significant increased costs to the project, examples given are an updated locker layout to house increased hose, moving of pumps and suitable power take off design to operate the Ultra High Pressure equipment (UHP).

It is our opinion from engaging with personnel across the service that the RRU design is more appropriate for an urban environment rather than the rural one in which it will be operating. We believe the RRU project would have benefited from more engagement at the outset. The main issues that have been raised regarding its rural suitability are:

- An initial lack of capacity for lay flat hose which has subsequently been increased from four to eight lengths at significant additional cost to reconfigure lockers.
- A lack of suitable tyres for the rural environment, we would have expected all-weather tyres for better performance in adverse driving conditions.
- No 4x4 capability which would have been advantageous for all-weather driving in remote areas.

With an initial order of 33 vehicles, the RRU project has been put into full implementation without a suitable trial of the complete concept, including the UHP equipment which the vehicles carry. We consider that without having a thorough scoping and evaluation process, the UHP equipment carries a significant risk of not embedding as securely or efficiently in firefighting culture as would have been the case otherwise. The initial order was subsequently increased by a further seven vehicles before the first production vehicle had entered operational service. We would expect the SFRS to evaluate the initial roll-out of this new concept vehicle and incorporate any lessons learned in any further roll-out.

On a positive note, the RRU strategy to purchase fully built and equipped vehicles as a complete package, which should stay together over the entire lifecycle, and have the ability to be rotated around stations dependent upon usage and servicing, we find to be sound. The fact that spare vehicles are included in the strategy to enable a drive in, drive out capability, where an RRU appliance is swapped for an identical one which the station then retains whilst the original is taken for maintenance, can only enhance the overall management and efficiency of this new part of the fleet.

9 The SFRS RRU Implementation Phase 1 Appendix A 05/07/2017

Figure 4: RRU Image – SFRS Corporate Communications

HMFSI recognises that a project report to rationalise the SFRS support fleet[10] is clearly mapped out with thorough research and good project design implemented to successfully map assets and plan for future requirements. The report culminates in a suite of four options and a preferred option for consideration by the SLT. Project costs are projected to be recuperated through year-on-year savings, leading to significant future cost reduction for the Service and there is a five stage implementation plan complete with milestones. Since the completion of our fieldwork, we have been made aware that the SLT have taken the decision to implement the preferred option but to date the project plan has not been implemented. We are advised that this project will run in tandem with a new environmental project to introduce 45 new electric cars to the support fleet. We would encourage the Service to continue to progress this piece of work in order to maximise returns on the identified savings.

10 Report of the Review of the Scottish Fire and Rescue Service's Support Vehicle Fleet

During our fieldwork we found that the workshop infrastructure is on the whole good. There is good equipment and facilities at all locations, in some cases it is excellent. We feel that with ongoing investment all workshops could be brought up to an excellent standard.

Cowcaddens workshop is found to have the best overall staff organisational structure which works well to deliver outcomes. There is work underway on a proposal to relocate Cowcaddens workshop. A comprehensive options paper was approved by the SFRS Board on the 28 June 2018[11], with the preferred option of a move to the SFRS Headquarters site at Cambuslang. We are subsequently advised that this option is no longer viable due to existing contamination on the site. We are disappointed that this was not identified at an earlier stage prior to the options paper being delivered to the Board, particularly as this site is owned by the SFRS. The SFRS are currently considering alternative options and a project board is set up to oversee the creation of the new facility. It is pleasing to see that there is representative body and employee participation. It is important that lessons such as drive in, drive out capability and placement of bays and equipment to ensure maximum efficiency are learned from the previous Dundee Workshop project and incorporated into the planning and design of this new facility.

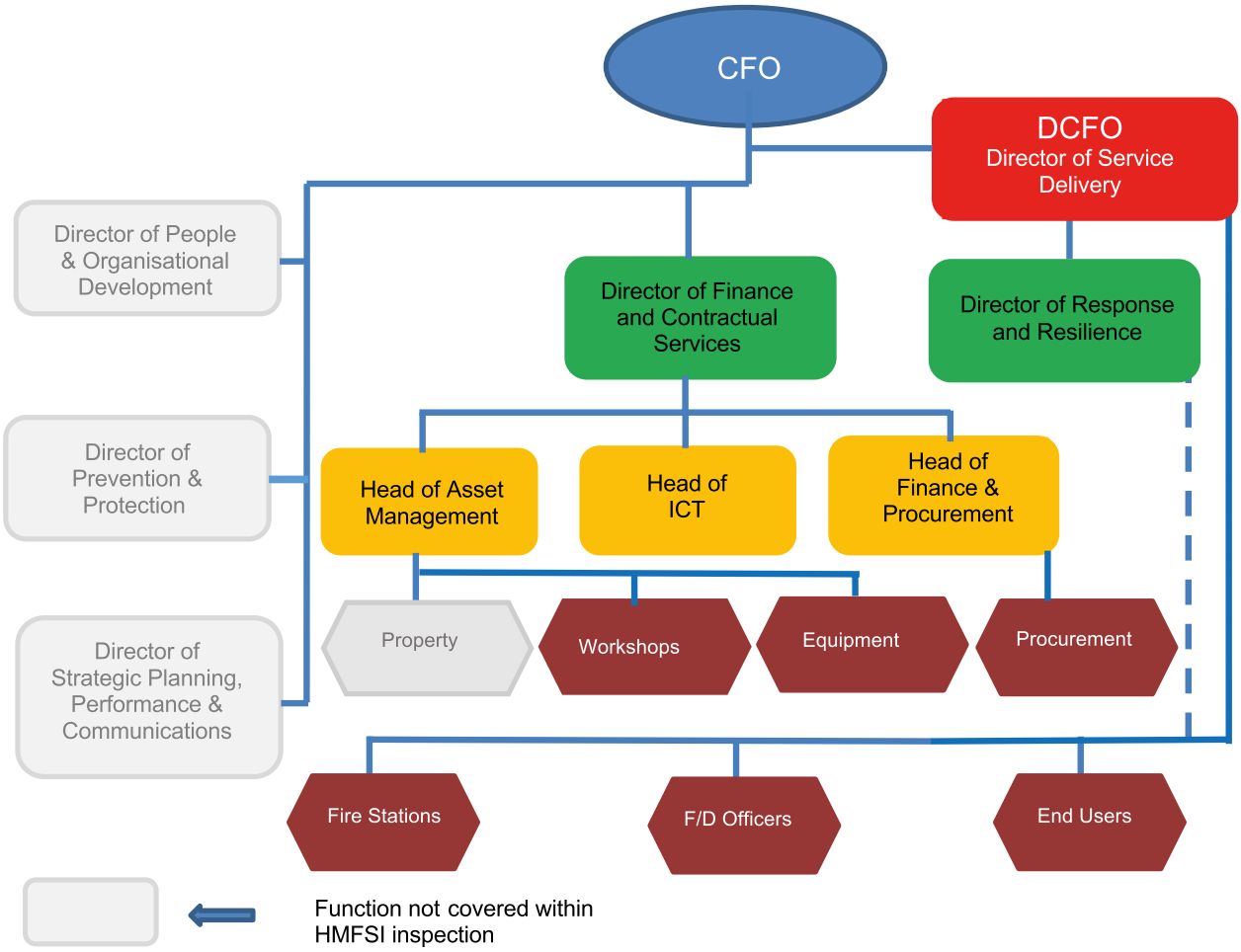
Looking at the complete workshops function, there are signs of silo working within the current structure model. We find the workshops to be predominately working as individual locations and not operating as a single cohesive entity, servicing the needs of the organisation as a whole. Examples are:

- Service-wide requests to locate specific spare parts known to be held in other areas were not acted upon by other workshops.
- Limited scope to share best practice and collective problem solving, although we have recently been made aware that the fleet manager has, since our Review, introduced a meeting structure to alleviate issues.
- Record keeping is not consistent between workshop locations, with differing degrees of usage and sign off or a consistent method of recording service history, with some areas having additional paperwork or guidance to supplement SFRS documents.
- There is no regular staff interaction between different workshops. It is reported that intermittent work is undertaken in neighbouring workshop areas, particularly out of hours cover, but mechanics think that this is carried out on a goodwill basis rather than facilitating a global organisational need.
- An Aerial Ladder Platform at Perth was moved by R&R to Edinburgh then moved again to Springburn, resulting in abortive training costs for mechanics in the East SDA then further costs for mechanics in the West SDA and an overall negative impact on workshop productivity.
- Inconsistent organisational responsibility for transferring vehicles to and from workshops, resulting in mechanics spending prolonged periods transferring vehicles which is not the best use of their skillset and further reducing workshop capacity.

11 The Board of the Scottish Fire and Rescue Service. Report No. B/FCS/07-18, Agenda Item 13

It is evident that there is no clear delineation between R&R and SD on responsibility for areas of business and a disconnect between R&R and the Fleet Function on fleet movement decisions. This doesn't stop business being carried out, but does contribute to inconsistency and inefficiency. SD see themselves as customer to both Fleet and R&R. For the day to day mechanical issues SD liaise with Fleet and for the impact on operational cover they liaise with R&R. R&R on the other hand see themselves as the proxy customer for SD with regard to fleet. We recommend a clear delineation of roles and responsibility in this area to reinforce efficient working and to avoid confusion and the possibility of duplicated work.

Figure 5: Directorate areas within scope of review:



The figure above shows the Fleet and Equipment Function reporting through the Head of Asset Management to the Director of Finance and Contractual Services. We feel that this interface does not allow for a clear customer focus in the delivery of the Fleet and Equipment Function to its end users. We feel that it would benefit the SFRS to review the relationship between the Fleet Function and the end user with a view to achieving a greater emphasis on customer focus and satisfaction to improve the understanding of expectations from both partners.

It is apparent that the lack of a comprehensive business continuity impact assessment of policy provision and policy decisions is hampering operational effectiveness in some areas:

- The Managing Occupational Road Risk (MORR) policy development is impacting on the driver training department's ability to meet driver familiarisation needs, with some examples of vehicles remaining 'off the run' for substantial periods of time awaiting staff training.
- Implementation of the MORR policy is impacting on workshops ability to provide spare appliances due to crews being unfamiliar with certain types of vehicle and the policy requiring a familiarisation course in order to drive them.
- There is no overall plan to consolidate antecedent fleet polices into the SFRS policies, they are addressed on an ad hoc basis as or when required.
- There is no national guidance on the responsibility for vehicle movements for servicing and maintenance, resulting in reduced workshop productivity when mechanics are utilised for the task.

There is little evidence of strategic direction on the development of a comprehensive Asset Management System to monitor and control assets and allow their life cycle to be monitored, assessed and costed. The understanding and use of the current 'Tranman' system is well below the standard we would expect, partly due to a lack of investment in the software, but more importantly on training to enable its operators to maximise its use. This area will need to improve with the investment in the upgraded software.

Tranman offers "core functionality tailored to individual requirements, accessible via multiple devices which integrate with other systems, helping to streamline process to deliver efficient fleet management services"[12]. We found, in all but one workshop, that managers have a very limited use and poor understanding of the system and that information on vehicles and equipment input to the system is poor, therefore creating doubt on their ability to run simple reports and keep track of basic vehicle and parts warranties. Since the conclusion of our fieldwork we are advised that the SFRS are in the process of purchasing an updated version of Tranman, which we hope will alleviate the issues encountered with the current version.

The SFRS has a robust Asset Disposal policy which gives a suite of 'end of life' options for assets in order to gain the best available net return, whilst reducing risk to the Service, the environment and the receiving organisation. There is a thorough procedure involved, incorporating managerial and Finance Department sign off. Where an asset has minimal or no residual value, an option exists to make a charitable/humanitarian donation to a UK registered charity. The SFRS has stopped selling appliances on the open market due to security concerns. Recycling is also encouraged with good evidence of assets being stripped for usable spare parts where possible.

Although Workshop managers are very familiar with the strengths and weaknesses of fleet vehicles under their control, they cannot ultimately decide what vehicles are replaced, as this is carried out nationally by the fleet manager. At Cowcaddens the workshop manager allocates each vehicle a conditioning score every year based on several different aspects in a 1-5 scoring matrix which is input into Tranman, giving an accurate picture of the West SDA fleet

12 https://www.civica.com/globalassets/7.document-downloads/2.uk-docs/product-information/transport/t.pdf

condition and giving a good indication of the longevity of individual vehicles. We consider this to be good practice and are advised that the SFRS will introduce condition scoring nationally which, if used, will greatly assist the governance of the fleet and support a more joined up approach towards managing vehicle replacement.

However, the SFRS strategy is to retire a vehicle based on a specific age[13] and we would suggest that the condition scoring method would better support Best Value in the process of vehicle replacement. We feel that SFRS should review this published strategy to better reflect the inclusion of condition scoring in the overall process.

The SFRS Finance Department works out the Net Book Value (NBV) of an asset using a straight line basis of depreciation founded on the asset providing equal economic benefit to the organisation throughout its lifespan. This system takes no account of condition scoring but assumes the asset is providing the same economic benefit to the SFRS in year one, as it does in year ten. If the asset is repaired and maintained properly, it will retain the same economic benefit from the beginning to the end of its life, which would be in line with an equal depreciation charge each year. This method is consistent with the way all eight legacy services depreciated assets and is viewed by SFRS external auditors as the most appropriate method for the asset base.

3.2_Procurement of vehicles and equipment

The purchasing of fleet vehicles and equipment is hampered by an enforced year-on-year budget which determines that the process of vision (R&D) – procure – build – pay, has to be fully completed in a single financial year, capital allocation permitting. We believe this does not allow for efficiency in researching, planning or securing Best Value.

There is good interdepartmental collaboration between Fleet, R&R, TED and SD in the form of the AMLB in respect of procurement of new vehicles and equipment. However, during the course of our inspection we noted a lack of efficient collaboration more generally at different levels. There is evidence that for new vehicle concepts, a User Intelligence Group is commissioned which would suggest the sharing of experience, knowledge, expertise and good practice. However, there is limited evidence of end user involvement in this process and there is a blurred vision of the concept, functionality and engineering design of new vehicles which is resulting in some common issues emerging:

- Workshop staff have no knowledge of maintenance requirements until vehicles arrive on site, where they then have to ‘learn on the job’.
- Workshop staff have no idea of the functionality of a new vehicle such as the operation of appliance booms, cab tilts etc. We are aware of an incident where mechanics got a new high reach vehicle stuck whilst maintaining booms and required a TED instructor to rectify the situation.
- Workshop staff do not have comprehensive knowledge of the operational requirements expected by firefighters of the vehicle.

13 Op. cit page 09

- Design issues which relate to one geographical area may not be suitable for another due to incompatibility of equipment. This was evidenced at Dundee workshop where the lockers on a new appliance were reconfigured to accommodate local equipment needs, resulting in long delays, and ultimately additional cost, before the vehicle was put into operational use.
- There can be a significant period of time before new pumps enter operational service due to awaiting training requirements on new vehicle technology, and resultant near miss reports from a lack of understanding of the new driving techniques required.
- Despite the technical specification for new height vehicles stating that they can operate in a jacked position up to an 11 degree angle, an operation failed when a vehicle was operating at this pitch and subsequently these vehicles are now restricted to operating at a maximum 7 degree angle. Concerns have been raised by local personnel on the restriction that this may place on future operations. R&R reported that the failure was entirely due to the incorrect usage of jacking plates, which raises questions as to the suitability of the plates or the training provided in their use. We would encourage R&R to review this decision.
- We found that Provision and Use of Work Equipment Regulations (PUWER) assessments are not always carried out before the procurement process, resulting in a lack of evidence that appliances and equipment are fully fit for purpose and wholly compliant with legislative requirements. This is recognised by the SFRS and we understand that the issue is now being addressed.

We think there should be a cultural change in this area of business, with a requirement for a multi–departmental evaluation following each procurement process, looking at the successes and failures of the project in order to compile organisational learning to inform and improve future project management.

The professional expertise and advice of Fleet is important during the procurement of specialised vehicles in order to identify the specification required. There is evidence which indicates that the Procurement Department did not fully embrace Fleet advice in the case of new High Reach Vehicles, which resulted in additional costs and down time. The new vehicles subsequently required adaptation to repair defects and there was unanticipated cost for the ongoing maintenance and repair of vehicles which were due to be replaced by the new vehicles. The potential for these defects was highlighted by Fleet at the specification stage of procurement. In this case, the savings made on the chassis purchase was significant, however, this has to be balanced against the fact that the vehicles are not in service some 18 months later. Lessons have been learned from this issue and the SFRS is now committed to buying complete build High Reach Vehicles going forward rather than a chassis purchase followed by a separate body build contract.

Fleet Departmental staff have a feeling of frustration with the procurement process in general and there is a perception that the Procurement Department is overly cautious of external challenge from suppliers. This is said to result in tender specifications being, in some opinions, too open, resulting in the process taking far too long and the customer not necessarily getting the product that they want. It is also reported that the Procurement Department is reluctant to add penalty clauses to tenders. However, the Procurement Department explains that, in its opinion, onerous damages clauses can lead to suppliers not participating in the process or building in the risk of penalties into their bid. It also states that although damages are possible

within Scots law it would require a genuine pre-estimate of the loss suffered as a result of non-delivery of a product. Again, a multi-departmental debrief of each procurement process might help ease anxieties in this area.

It was very apparent that the Procurement Department had been understaffed, and this was generally acknowledged by other departments. During Pay and Reward job evaluations, which took place early in the evolution of the SFRS, the procurement market was not fully understood by those conducting the evaluation. This resulted in procurement posts being significantly undergraded causing issues with retaining and recruiting staff. This was a major contributory factor in overall project dissatisfaction amongst both procurement and other departmental staff and has restricted work streams and prevented procurement processes being completed on schedule. This issue is now addressed by the SFRS which is offering a substantial market allowance and employed a recruitment agency to pinpoint and recruit suitable employees. We are advised that the department is now staffed to strength, with Fleet procurements being managed by a designated person and we would expect overall satisfaction to increase substantially going forward.

In order to ease some of the capacity burdens and to encourage good practice in cross organisational working, we think that there is scope for more collaborative procurements where there are commonalties of equipment used. There are many frameworks already in place in the Public Sector and Emergency Services, and a number already use an imprest stocking facility, to facilitate the efficient management of fleet maintenance. The Scottish Ambulance Service and Police Scotland for instance, use such a facility and are now looking to implement a Joint Framework Contract which will include a service level agreement and frequent contract performance review meetings. The SFRS should examine the potential to work in partnership with this collaboration

There is no contract or supplier agreement in place to provide vehicle spares to the SFRS. All workshops purchase from the marketplace on a regular basis. We are aware that one company has set up a discount matrix across its branches to ensure that the SFRS receives value but it was made clear to us that performance, efficiency and value could be improved by the adoption of an imprest stocking system or similar for the provision of vehicle spare parts.

During a procurement process it is common industry practice to include a framework for staff training. We found little evidence of this practice in the SFRS. As a result of this omission during the planning stage, finance has to be identified post project to train staff in basic requirements, or worse, training is not carried out at all due to prohibitive cost. However, with the new height appliances and the RRU project, some limited training is included in the tender indicating that lessons have been learned from previous omissions. When training is included in tenders it is unclear how this information is cascaded to stakeholder departments in order for them to ascertain requirements for training. We found evidence of departments enquiring to purchase training that was already included as part of the tender. We also note that instructors on specialist vehicles are not supported in continuous professional development (CPD).
We feel that TED should take ownership and manage all aspects of training included in the procurement process to remove any ambiguity of requirement, secure Best Value from the outset, ensure that training is suitably programmed and cascaded to all those who need it and that subject matter experts are appropriately supported in their CPD.

Our findings show that restrictive organisational internal procurement and finance system measures adversely affect the delivery of service of the Fleet Function across most of the workshop sites. The current cost ceiling imposed for the purchase of major items inhibits servicing and repairs, with a set of new tyres used as an example of a cost greater than the current cost ceiling and therefore is a purchase which requires additional authorisation. The Procurement Department assured us that such requests are authorised as soon as possible but this sign off does result in delays in the maintenance of vehicles and subsequent time taken for them to return to operational duties. This could be easily improved by moderating internal policy to take account of individual needs.

A single contract with a tyre supplier restricts delivery of service in some remote areas within the Highland and Islands. This is due to the supplier not being able to source stock promptly and having no performance management criteria placed on them by the SFRS. We feel that it would be prudent to have alternative providers so that no single point of failure exists and that suppliers should be held to account for their performance.

An area of good practice built into the procurement of new vehicle supply is that one vehicle from every build type is independently tested by the Vehicle Certification Agency (VCA), which provides assurance to the SFRS as to the quality and safety of the built product.

3.3_The role and operation of the workshop function

The Fleet Function at time of writing has around 100 staff. The function is headed by the Scottish fleet manager who reports directly to the head of asset management. A structure chart can be found in the appendix.

The Function plays a key support role within the organisation providing repair, maintenance and technical support for the Service's diverse and highly specialist fleet of, at the time of writing, there are in excess of 1,626 vehicles and appliances (which will rise with the further provision of flexi officer vehicles) and over 7,100 items of plant and operational equipment in-house.

Key areas of responsibility are maintenance of the vehicle replacement program, design and technical specifications for new vehicles in conjunction with internal and external partners, full-life scheduled and non-scheduled maintenance of vehicles and equipment, vehicle overhaul and refurbishment, modifications for second life and disposal. The department works closely at UK national level with other fire sector organisations and pursues opportunities for collaboration, for example Police Scotland share workshop space at Newbridge. However, we feel that the potential exists for greater collaboration. Department priorities are, developments in technology, sustainability, H&S, diversity and a well maintained fleet designed to meet future as well as current needs.

The Fleet and Engineering Function operates around-the-clock delivering a 24 hour/365 day per year service, in day to day operations and out of hours on-call capability. Each workshop has a manager, deputy manager, supervisor and a team of mechanics and equipment technicians. Inverness workshop is now upgraded from a satellite of Dundee workshop and is run by a deputy manager.

Outwith core hours there are on-call mechanics deployed by Operations Control on an 'as required' basis. The Fleet & Engineering Function runs a 35 hour, 5 day week, two group system between the core hours of 07:00 hrs – 19:00 hrs within three of the four workshops. The exception, Inverness, operates a 35 hour, 4 day week (compressed hours), two group system of nine hour days working staggered weeks with core days between Tuesday to Thursday. This shift anomaly was brought in to facilitate extended staff travel distances to outlying stations.

The working terms and conditions of SFRS mechanics are favourable compared to sector norms. However, there is concern and frustration amongst mechanics, that the system of shifts and core hours is not conducive to maximising overall staff output and efficiency. Staff feel that the changes to shifts introduced, in their opinion to save money, will cost more in the long-term due to out of hours call out costs. Staff were advised that a review of working practices will be carried out, but feel that the review is now overdue. There is no national on-call policy or procedures for mechanics with each SDA working a different system. A transport officer is available in the West SDA, who will take calls from Operations Control and direct mechanics as required. This function is not available in the North or East SDAs where Operations Control contact mechanics directly, a system which appears to operate adequately. We recommend that the SFRS considers a national standard and introduces a policy and procedure to suit.

Workshop staff state that their work pattern is not suited to the day to day operation of workshops or for working remotely at fire stations. This causes difficulties such as:

- RDS appliance changeovers on training nights being unsupported due to mechanics core hours.
- Appliance defects identified by wholetime crews at the evening shift change, are reported at a time unsupported by mechanics due to core hours.
- In certain areas, workshops can be empty of productive staff at times, due to work pattern or offsite requirements and dealing with the delivery of vehicles across the Service.
- Mechanics feel pressure to return from work at stations by 19:00 hrs, regardless of whether a repair or maintenance is complete, resulting in additional time taken to revisit sites to complete unfinished work and additional time for vehicles being out of operational service.
- There is no incentive for the early shift to work beyond 14:30 hrs (shift end) as staff are still within core hours, so no enhanced payment will be earned (staff commented that they liked the time off in lieu system which is now no longer in operation).

The shift system and out of hours working procedures are to be the subject of a review by the SFRS, however we believe that the review is overdue and we hope that there is a thorough analysis of working practices to address concerns, and ensure equity and Best Value.

The fleet manager raised concerns over the age profile of his workforce, reported to be an average of 48 years old. Staff also feel that there is very little succession planning in place and no flexibility for working reduced hours or job sharing, which we understand would be an option favourable to some staff. Workshop managers reported that recruitment of mechanics is proving difficult. At 35 hours, although a good hourly rate is offered, prospective employees are put off by the lack of opportunity to supplement the basic wage through overtime. The SFRS should monitor the retirement profile and act early to avoid long-term staff reduction with the resultant decrease in production. Some staff at Cowcaddens have intimated that they will not re-locate when a new workshop opens, thus creating a foreseeable shortage which could affect the initial successful operation of the new facility.

The SFRS has not taken advantage of the return it could receive from employing apprentices. In the case of the workshops, use of apprentices could alleviate capacity issues and help with recruitment difficulties whilst contributing to the Scottish Government's aim to create a skilled workforce that is ready to face the future and drive economic growth and prosperity. We are advised that the SFRS are looking into the benefits of utilising apprenticeships.

There is a lack of support and acceptance by workshop staff for the staff appraisal process, which is considered by some to be a tick-box exercise rather than a performance and personal development tool. Further to this, some mechanics are generally unwilling to act-up when a supervisor is absent, the reason for this is stated to be due to barriers in the payment structure. Payment for acting-up is only recognised after the completion of one complete week in the higher graded role, therefore payment may be delayed a number of months if opportunities to act-up are sparse. Staff also feel that their development is hampered by a lack of training opportunities in general and specifically in new equipment, or equipment transferred from other areas. Examples given are hook lift equipment for the high volume pump and training from Godiva on their particular pumps. We would expect workshop managers to clarify the purpose of the appraisal system and engage with their staff on reasonable expectations and outcomes from the procedure.

We were advised by some staff that they had been adversely affected by a job evaluation process which sought to harmonise terms and conditions, and that the exercise has had a negative impact on morale. There was a resultant financial inequality amongst staff fulfilling the same role, with new staff placed on higher salaries than existing and long-term staff. We are now advised that Fleet staff salaries are balanced across the Service and comparable to the private sector.

There is little evidence of any clear performance management within fleet, this is directly attributable to a lack of available, cohesive and quality information to enable managers to produce regular and meaningful reports. For a performance system to be effective it requires the ability to benchmark tasked repair times for common maintenance operations and record costings for labour and parts used, in order to measure against expectation. Work needs to be scheduled to allow the uninterrupted flow of vehicle throughput to achieve the efficiency required. Fleet should seek to build a culture of accountability to the customer's needs, with visible performance indicators available through reports on performance against national standards and expectations.

Figure 6: Water Rescue Resource Image – SFRS Corporate Communications

The recent appointment of a marine engineer is seen as a great success and is already paying dividends in terms of marine equipment turnaround. The position is amongst the busiest in the Dundee workshop however it is a single point of failure and consideration should be given to the maintenance of adequate cover in this area, potentially through an apprenticeship.

3.3.1 Health and safety at work

It is reported that the Health, Safety and Wellbeing (HS&W) Department has a good working relationship with the Fleet Function and that work is being carried out to introduce a Fleet Health and Safety (H&S) handbook[14] however this is not yet implemented and work is ongoing with the fleet manager on an implementation plan. There is also a new H&S recording system being built by the organisation, replacing the existing off-the-shelf system, which should be more suited to all the SFRS's specific HS&W requirements. This is seen as a positive step by SFRS staff who feel that the current system is labour intensive and on occasion not a comfortable fit for the incident being reported.

14 Fleet and Equipment Workshops Health and Safety Handbook April 2018

HMFSI recognises that H&S is fundamental to the safety of the general public and the SFRS staff, and that policies need to be developed in conjunction with the staff which they will affect. Restrictive or inappropriate application of policies can demotivate staff and managers and place them in a difficult position should their workplace needs necessitate a breach of policy in order to maintain efficiency in day to day operations.

The MORR policy is an example where there is difficulty and in particular vehicle reversing. The policy dictates that vehicle reversing will always be carried out using suitably qualified supervision, with the threat of discipline proceedings if not adhered to. This practice is not practical or indeed feasible for lone-workers such as mechanics undertaking maintenance on vehicles in remote RDS stations, or whilst working alone at workshop locations, which are common occurrences. This policy is being reviewed by the Driver Safety Group leading to the introduction of a Drivers Handbook which we hope will address this particular issue.

Workshop staff feel that working practices are being restricted or prohibited on the direction of the HS&W Department without having an understanding of the consequence to productivity and without having visited workshop sites to observe or understand requirements. Noise and physical risk assessments are carried out by mechanics on the use of air tools, the results of these assessments led to a directive to stop their use due to 'white finger injury' concerns by the HS&W Department. Staff feel that there is no consideration given to control measures, permissible under the governing legislation, which could be put in place in order to continue use of, in their opinion, a valuable piece of equipment which is in common use across the sector.

Conversely, HS&W staff feel that they are working in the best interest of employees by completely removing the equipment. It is clear to us that better two way communication is desirable and unambiguous justification for decision-making should be issued and understood by those affected. There should also be an understanding of policy impact on working practices and their effects on the staff's ability to keep the workplace functioning in an effective and efficient manner in order to support organisational objectives. Overall the inspection team feel that there is scope for workshop staff to embrace cultural improvements in H&S as a whole and increase near-miss reporting in order to maximise organisational learning.

Training is an important element and a legislative requirement for staff that have a safety monitoring role within workshops. Training assists them to recognise the risks involved with their activities and to apply appropriate measures to control and manage those risks. A training gap analysis was carried out for workshop managers some time ago and given to TED, and only now is training starting to be rolled out. We are concerned that there is an organisational risk here as workshop managers and supervisors are asked to do health and safety inspections without any formal training on how to do so. This is further exacerbated by the fact that no gap analysis on H&S training has been carried out for mechanics or equipment staff. We feel that this is a fundamental safety concern and an organisational risk and should be addressed immediately.

The SFRS has learned lessons from various health and safety events caused by vehicle safety enhancements such as ESP. The SFRS is now horizon scanning, looking at forthcoming new technology such as vehicle exhaust recycling and autonomous braking, and anticipating when and how it will affect vehicles and drivers before the enhancements enter service. It is anticipated that early notice will allow for the development of training packages to deal with

technology before it becomes problematic and this is sympathetic to national safety advice not to remove safety systems from vehicles. The SFRS is aware that it has to adapt early to the way its drivers will drive with new technologies and we understand that the Driver Safety Group has been tasked with monitoring and implementing all such enhancements.

3.3.2 Fleet management software

The SFRS, through a process of procurement, chose Tranman as its vehicle management software. The supplier of Tranman estimate the company delivers fleet management solutions for some 48% of UK fire and rescue services and is an established and competent provider of these services. The Tranman system was in use in Strathclyde and Tayside legacy services, and is now rolled out to all areas. The SFRS is not running an up-to-date version of Tranman; it is operating a version which is reported as being almost ten years old. As mentioned earlier we are advised that the SFRS are in the process of purchasing an updated version of Tranman (version 9).

In speaking to members of the SFRS ICT Department, it is not clear if Tranman is an entirely suitable platform to host the management of all of the SFRS's hard assets. Clarity in this area will not be reached until ICT can fulfil a project to build an integration layer to allow a view of data across all systems, which is estimated to take around 18 months. There is work required to bring the data held on Tranman up to a SFRS standard across all workshops. In anticipation of the upgraded system, Fleet are planning to review data and incorporate a SFRS standard of data input to achieve a quality electronic data record system for all fleet and equipment. We would encourage a thorough data cleanse as any new system is still heavily dependent on the quality of information input to the system and with limited timescales for completion, we consider this a priority.

It is apparent from interviews that there has been little or no training for workshop staff in the use of the existing Tranman system. We reported this previously as an issue in December 2014[15]. A day of training from the software company was said to carry a cost which the Service felt hard to justify within existing budgets. Due to this position there is no consistency of use across the workshops and a general lack of understanding about its functionality. Again with the introduction of the upgraded system, thorough training needs to be a key component if the roll-out is to be successful. With limited timescales, a programme has to be put in place immediately to support managers and key staff in its functionality balanced against Service requirements.

As new vehicles come into service there is little data input onto Tranman, despite a full records pack being provided by vehicle suppliers. After discussion with vehicle providers, we feel that they should provide a cover sheet within every pack detailing the separate warranties and the particular detail that Tranman requires to allow for easy input when a vehicle is introduced to service. This information is not requested by the SFRS and this places a burden onto workshop managers to fill in detail retrospectively and as a result it is not being carried out to any prescribed standard. With this lack of detail within the system it is suspected by some managers that the SFRS may be paying for repairs that should have been covered by warranties.

15 HM Fire Service Inspectorate, Performance Management Information Systems in the SFRS, https://www2.gov.scot/Resource/0047/00476788.pdf

Tranman at present, is not interfaced with the SFRS finance software Technology One and therefore it is difficult for fleet managers to have a full up-to-date awareness of existing budgets with no tracking of vehicle supplies purchased or full life cost history of vehicles and/or equipment. The upgraded system is reported to solve this issue with full integration, which will allow 'pence per mile' calculations to be available to managers for all vehicles. This will allow for a more robust financial management of Fleet and should be incorporated into a performance management strategy.

The existing Tranman system is generally thought by staff, to be inflexible and time consuming to use. Common issues reported are:

- Mechanics have limited access to the system.
- There exists a single point of failure with one person from workshops identified to manage and develop the system.
- Parts are not listed on the system to give whole life costs. (Whole life cost can only be calculated for the West SDA fleet where Tranman is used to raise parts orders under legacy procedures).
- Fuel management systems do not feed directly into Tranman or Technology One and therefore fuel costs are not recorded against individual vehicles anywhere in the fleet.
- The work completed narrative field is restricted to approximately 20 characters, making it difficult to keep a true and thorough record of works undertaken (this has potential ramifications should a vehicle be involved in an accident, with very limited history available to investigators).
- Mechanics have to input data via a touch screen system which is reported to be time consuming and not the best use of their skill set.
- The vehicle scheduling system is not dynamic. When an inspection occurs outwith the 13 week schedule, the system cannot automatically recalibrate to put it back on an updated 13 week cycle.

We hope that these issues will be addressed by the upgraded system to provide a more versatile and user friendly experience for staff.

New vehicle General Packet Radio Service (GPRS) enabled diagnostic equipment (Texa) requires Wi-Fi connectivity which is generally limited or on occasion non-existent within workshops. There is Wi-Fi in the workshop office area but it is generally inaccessible and this restricts use and has caused employees to seek alternative solutions to update equipment. In the modern world, equipment functionality is increasingly dependent on WI-FI connectivity and as a result we encourage the SFRS to embrace this and include full workshops coverage in its system. Staff have had very limited or no training in the use of the Texa equipment.

In general the inspection team found that the SFRS is not maximising technology as far as fleet is concerned. The Service should consider a vehicle tracking system for its whole fleet which would assist in the efficient tracking and management of its pool vehicles, spare appliance tracking, monitoring locations of lone workers and guarding against vehicle theft with inherent security concerns. We also think that consideration should be given for the pool vehicles to be linked to a booking system to provide a national networked capacity to track and control vehicle usage. Only then will the Service get maximum usage and achieve Best Value from all its vehicles.

3.3.3 Vehicle maintenance

The SFRS has implemented a scheduled cycle of inspection and servicing for all frontline and specialist appliances, which is split into four quarterly inspections per annum:

- 3 x 13 week safety inspections which check the roadworthiness of the vehicle
- 1 x major inspection which gives the vehicle a full service and repairs any outstanding faults

This schedule has taken time to embed into all areas and targets have been routinely missed, sometimes by a period of two to three years for a major inspection (although a safety inspection was carried out in its place). However, frequency overall in the last year has improved with evidence at most sites now proving greater target efficiency. End users at fire stations are unaware of appliance maintenance schedules or when their appliance is due to be taken away for a major inspection. In some cases they are only made aware if mechanics attended the fire station by way of the station sign in book. If maintenance schedules were more widely publicised, end users could implement control measures to limit the impact of the vehicle changeover. We are advised that the Fleet Portal on the SFRS intranet contains vehicle maintenance schedule information. We would therefore encourage SFRS to make all personnel aware of this.

Mechanics report that the inspection cycle leads directly to an increase in areas to address during a major inspection and consequently time taken to complete majors plus an increase in reactive repairs. There is concern amongst mechanics that certain actions are now not included in the 13 week safety inspections, such as lubrication of pump prop-shaft and light portable pump cradles. We are also advised that a road test is now not always possible or even a basic brake test. A number of mechanics feel obliged to test audible warning systems and blue lights, although these are not included in the 13 week safety inspection schedule. There is a view amongst mechanics that the 13 week safety inspections are being carried out to cover legal roadworthiness concerns rather than being part of an effective schedule for maintenance.

Further concern was expressed that a number of major inspections are not being carried out in time, with some in excess of two years overdue and are marked as undertaken on Tranman but annotated on the mechanic's paperwork as 'safety check only' with the process for re-scheduling unclear and relying heavily on individual personnel.

Record keeping across workshop sites is not uniform – it ranges from good at Cowcaddens, where the system has been unchanged for many years, to poor at Inverness where a new system has been adopted and adapted as the SFRS evolves and all without a dedicated workshop manager for a long period of time. We suggest that the full servicing schedule in all areas would benefit from a thorough audit by Fleet with an action plan to rectify any concerns identified.

During our site visits it became apparent that the culture amongst supervisors is not to check vehicle inspection history before scheduling a new inspection on a vehicle. Managers confirmed that supervisors or mechanics cannot easily access previous inspection sheets, but that outstanding issues should be recorded by supervisors in the 'campaign recalls' section of Tranman and can be picked up the next time the vehicle is seen.

Whilst carrying out sample checks of appliance records, we identified a record where faults identified during a vehicle inspection, were not recorded as being rectified and then not identified as being present or outstanding at the following two inspections. Faults then re-appeared at the major inspection identified as a slightly different fault. This inspection sheet did not specify whether the fault was fixed but the list of faults on a separate sheet from the same inspection was ticked off. If an incident occurred involving a vehicle, investigators could not easily compile a full vehicle service history. Whilst this may be an isolated example, it illustrates a need to improve the record keeping process in order to provide usable, accurate data for future reference.

A number of mechanics expressed the view that the service inspection sheets were poorly designed, although we are recently informed that an updated version is due for circulation. Mechanics reported that a working group was set up to design a new SFRS inspection sheet however this work was shelved in favour of the existing sheet used in the West SDA. Our sampling of records identifies poor evidence of supervisor sign off or consistent mileage recording by mechanics on the documentation which we feel exposes the SFRS to unnecessary risk. Guidance is issued in some areas to address poor completion of service sheets but we would encourage the re-introduction of the working group with representation from all sites as a means to promote good practice in this area and therefore reduce or eliminate corporate risk. We also think there is scope for better use of technology in this area and would encourage the SFRS to look beyond paper-based systems.

In some workshops, spare parts ordering is problematic bordering on inhibitive with the process on occasion taking days. We feel that this promotes a culture of apathy in staff as they feel that there is no urgency to process repairs. The delay in sourcing and processing parts has significant implications on production efficiency with mechanics requiring alternative work whilst parts are sourced. This also influences the number of appliances that are retained for maintenance at any one time.

We were surprised that, apart from Cowcaddens workshop where there is a form of imprest stocking, only a limited quantity of high use spare parts stock is retained for immediate use. Many forms of imprest style stocking are widely available in today's market place and we feel the use of such a system or similar would greatly enhance efficiency of workshops throughput. Staff stated that the fitting of spare parts is not recorded on Tranman and so there is no record of when a vehicle had any parts replaced. Again, this inhibits whole life costings and throws doubt on the efficient use of warranties.

There is praise from station-based personnel of the system of defect reporting, with the defect portal described by some staff as working perfectly. However, mechanics feel that more detail of the fault identified would help them diagnose problems and prioritise the best course of action quicker. It is felt by some that it would greatly enhance the portal if a photo of the fault could be uploaded giving mechanics a good visual aid to assist in addressing defects. The out-of-hours service is similarly praised where users report, in the main, good access to mechanics when required via Operations Control. There is also good evidence of local commercial garage support to remote rural areas which do not have easy access to immediate SFRS mechanic support, however there is confusion over the criteria for their use.

It is positive to see that the SFRS works in partnership with the Freight Transport Association (FTA) to carry out safety inspections in some remote areas, which is understood to be cost

effective. This provision is further enhanced by the FTA carrying out quality checks where FTA inspectors periodically check before and after vehicle maintenance works undertaken by mechanics. This is reported to be working well and we believe should form part of a total quality management system.

A further area of good practice identified was the International Organization for Standardization (ISO)[16], ISO 9001 for a quality management system and ISO 14001 for effective environmental management, awarded to the West SDA workshops. Staff there have worked hard to qualify for and maintain the award. We are told that the head of asset management intends for this standard to be taken up by all workshops, although no timescales are apparent.

Figure 7: Mechanic Image – SFRS Corporate Communications

3.3.4 Vehicle movements

Responsibility for vehicle movements requires clear definition in order to establish efficient movement of vehicles. We found that no firm policy is in place for vehicle movements in respect of maintenance and repairs. Uniformed staff are more engaged within the East and West SDAs in assisting with vehicle movement but in the North SDA this function is solely undertaken by mechanics. The fleet manager considers that vehicle movement is a

16 https://www.iso.org/iso-9001-quality-management.html

uniformed staff responsibility, while the DACO in R&R considers that the responsibility lies with workshops. We think the lack of clarity in this area is responsible for a blended approach being adopted across the country with no two areas being the same and inconsistency as to role and responsibility.

Where mechanics are solely utilised for vehicle movements, this is certainly not an efficient use of their time or skillset. Examples are given of two mechanics being required to deliver and collect vehicles for changeover, with distances especially in more remote parts of the country being excessive. This requirement will often be undertaken over two complete days resulting in a loss of four staff days out of the workshop severely restricting workshop productivity.

Consideration should also be given to working smarter (taking into consideration employment terms and conditions) whilst undertaking vehicle inspections in remote rural areas in order to capitalise on opportunities to group vehicles for inspection and cutting down on wasted travel time. We found evidence in Inverness workshop of mechanics driving three to four hours to carry out a one hour vehicle safety check, meaning that a whole day was taken up with a single one hour inspection. This is not an efficient use of time, assets or mechanics' skillset.

Equipment technicians are reported to have undertaken vehicle movements in the past however following a salary grading process, LGV licence requirements were withdrawn from their role. Equipment technicians were led to believe that uniformed staff would fulfil that requirement. Equipment technicians have therefore withdrawn their availability to carry out the task despite some still being qualified to drive LGVs. However, this differs across the country as East SDA equipment technicians will still move vehicles if there is a requirement for them to do so. There is a need for a definitive decision as to whether this is part of an equipment technicians role, as vehicle movements can be time consuming and therefore productivity in some areas may be down as a result. This issue may lead to an imbalance where performance is measured across workshop sites.

In order for a vehicle to be released into workshops for maintenance or repair it has to be replaced by one of equal capacity in order to maintain operational cover. There is evidence of a lack of suitable spare appliances in some areas, although we are told that globally more are available than was the case during legacy provision. Spare vehicles are generally of a poor standard often with inherent faults, such as lighting issues and pumps not passing dry vacuum tests. This situation seems to be gradually improving as the SFRS brings new vehicles into circulation. Some spare appliances, due to legacy service arrangements, arrive fully equipped whilst others are only partially equipped or with no equipment at all. This causes issues for station personnel, with concern raised over safe stowage of ill-fitting equipment. There is also evidence that in a lot of cases all the required equipment cannot be re-stowed on the spare appliance, resulting in an assessment of risk for leaving equipment off the appliance, thereby reducing the effectiveness of the crew in some aspects of their role.

The MORR policy is also causing difficulty with spare vehicle selection and is restricting the distribution of spare vehicles to stations, and in particular movement around the Highland area. This is due to policy interpretation where it has been decided that a TED-led driver familiarisation course is required before drivers can drive an unfamiliar appliance for example, differing gear box configurations. Appliances can remain within workshops for long periods of time after major inspection or repair, particularly within Inverness workshop area due to the limited opportunity to utilise operational drivers for delivery.

In order to cut down on vehicle movements and all the associated issues (described above), contracts have been set up with service providers on some islands and isolated areas to maintain fleet stock, with sampled evidence of a good interface and record keeping between both parties. We see this as good practice and encourage a healthy balance ensuring Best Value is obtained.

3.3.5 Equipment issues

Each workshop has equipment technicians embedded for the care and maintenance of specialist equipment such as hydraulic rescue equipment, gastight suits and water rescue equipment. This role has grown more diverse incorporating more equipment and has been, to a degree, standardised across the country to provide a national footprint with existing staff bolstered through the recruitment of displaced trades such as blacksmiths and spray painters; technically minded staff who have taken time to upskill in the widespread requirements of the role. This process was hampered by a lack of budget allocation for the significant amount of re-training required with money having to be found from existing operating budgets. It seems to us that it has proved difficult to standardise this role throughout the country due to the diversity and proliferation of legacy equipment and with no platform to bring technicians together from all areas to share common problems and good practice solutions.

There is uncertainty over line management responsibilities for equipment technicians. Workshops managers think it is the responsibility of the equipment manager, while the equipment manager is of the view that it is workshop managers' responsibility. This further compounds a lack of role clarity which does not help in the support of this function. This confusion combined with the lack of a robust national record keeping system leads to further concern that the equipment manager finds it challenging to monitor and control all the equipment for which he has responsibility for. However, the SFRS has recognised this as a risk and plans to put compliance officers into the staff structure to confirm compliance with legislative requirements and internal policies. No timescales are given for the introduction of these posts.

The diversity of legacy equipment restricts the ability to interchange spare appliances outwith legacy areas and in turn the ability to rotate appliances more widely across Scotland. To try and combat this, the SFRS has devised a standard Scottish equipment stowage solution which would, in time, bring to a halt the re-configuring of equipment stowage on new appliances due to local equipment not conforming to locker layout. At the current rate of fleet replacement this issue will take many years to rectify as new vehicles and standardised equipment come into service and the solution is not envisaged to be retrofitted to appliances already in service, thus prolonging the problems.

Equipment technicians and workshop managers do not have a single comprehensive system for tracking the location and scheduled testing cycles of specialist equipment. Tranman and its use has proved to be inflexible in this area and as a result, the equipment function cannot monitor all assets with a view to rotation and relocation to extend working life. Station personnel cannot access Tranman, and therefore use a separate paper-based system for the standard testing of equipment, therefore no single record exists for equipment, and recording systems differ between local areas. The SFRS is introducing standardised Technical Information Notes (TINs) which will standardise equipment testing requirements across Scotland.

3.4 End users – fire station and specialist staff

In order to ascertain the opinion of end users, we visited fire stations in the North, West and East SDAs, talking to both wholetime and RDS firefighters. We concentrated on stations that have taken delivery of new vehicles in order to assess transitional arrangements, and outlying stations which have greater travel to a workshop location. Staff are very complimentary of the investment by the SFRS in new vehicle stock, widely praising the quality of vehicles purchased. They also unanimously state that there was no consultation on local requirements which may affect suitability of new vehicles for the area they are assigned. Some issues raised were:

- Concern that the new high reach vehicle in a city centre may not be suitable for the steep inclines apparent in the city as the maximum pitch angle has been restricted to 7 degrees. (The former appliance would safely manage 10.5 degrees).
- Concern that the ground plates for a new high reach appliance are too small and do not stack safely together. (This may have been a contributory factor in an accident where jacks slid off the ground plates whilst pitching on an incline. R&R has a different view and showed evidence of operator error and are looking to rectify the issue, which casts doubt on the suitability of the ground plates and/or the training provided in their safe use).
- Staff at a station are concerned with equipment stowage on their pumps. There is not a dedicated vehicle for rope rescue and therefore the specialist equipment has to be carried on standard pumps, creating capacity issues. This is especially problematic during vehicle changeovers, where locker layouts may be completely different.
- A new rescue pump arrived on a fire station and remained unused for a year awaiting the fitting of a BA bracket. Before going into operational service it was recalled again to be fitted for a housing for a heavy rescue platform, which was traditionally carried by the replaced appliance. Personnel were then informed that the retrofitting of the housing on the new appliance was considered to be too expensive and would not be carried out. Personnel are unaware of when or if the new vehicle will arrive.
- A high reach vehicle (1996 registration plate) is frequently in workshops and is considered by station personnel to be past reliable service. With the vehicle out of service so often it is having a major impact on retention of operators' skills and the training of new operators.
- At outlying stations, mechanics are reluctant to work beyond the end of their shift and will leave to be back at their workshops in plenty of time before their shift ends, whether a vehicle repair is complete or not.
- There is uncertainty on the criteria used to determine whether a local garage can carry out a repair or if a mechanic is sent by the SFRS.
- Station personnel in general have no knowledge of maintenance scheduled for their vehicles and think that if they could view a maintenance planner, it would enhance contingency planning for the loss of their vehicle. Since completing our fieldwork we are informed that the information is available on the fleet and equipment web portal. This should be made clear to all staff.
- Mechanics do not routinely mark-up vehicle log books when defects are fixed, so no onsite history exists. This has caused issues with crews not being aware if a fault has been rectified or not.

- Personnel at remote rural fire stations who are part of the RRU project have concerns, and although not entirely a Fleet issue would be considered a dependency. Their concerns involve:
  - The quantity of hose on the appliance. They think that there may be situations where the amount of hose will not reach a water supply without additional appliances in support, particularly as, typically, there are limited hydrants available and open water sources are routinely used.
  - Being unable to put in a safe system of work to access a roof, as no roof ladder is carried on the vehicle.
  - The weight of the portable pump and their ability to manoeuvre it, particularly over rough terrain with reduced numbers of personnel.

The staff at the RRU stations we visited are very pleased to be chosen as recipients of the new concept vehicles. With the exception of a few issues they praise the vehicle and are optimistic about its introduction to the fleet. Crews think that the training was adequate and well timed with the vehicle having a relatively smooth transition into operational service. One of the stations visited has not been provided with a required training frame and so it is unclear how personnel there can train and become proficient with the new UHP firefighting equipment. There is also a shortage of abrasive solution to train with, especially on the islands where re-supply may not be timeous. There is also concern that supervising flexi officers and crews from surrounding units have not been trained in the capabilities of the new equipment. Incident commanders will have to incorporate new concept equipment into their tactical plan and it is unclear how this can be carried out successfully without awareness in the full range of its functionality and capability.

There is widespread recognition of the pressure placed on RDS and Volunteer units to maintain basic operational skills with a finite window of opportunity to carry out training. The SFRS in recognition of this burden has programmed training for the RRU project outwith weekly training commitments, ensuring the continuity of prescheduled core training for affected crews.

Other than long delays, the station personnel we spoke to think they have not been negatively impacted by the issues with new high reach appliances and are very impressed by the quality and technical specification of appliances. They think that the vehicles are a good investment and a positive addition to the fleet. Personnel are equally complimentary of the training course facilitated by the provider, however would have liked additional staff to be trained for resilience due to the transient nature of watch-based personnel. Workshop staff did not participate in the training course.

Service Delivery staff state that in general they have a good relationship with workshop staff and feel that, as reported, the vehicle defect portal works well. Staff consider that vehicles are on average away for maintenance for longer periods of time than they were used to previously. SD staff are of the opinion that it should be the mechanics' responsibility to move appliances to and from workshops. SD staff in some areas think that there isn't enough consideration given to investigating a fault before putting an appliance off the run. An example is given of a pump being put off the run causing a lengthy vehicle and equipment changeover, when the problem was found to be a faulty fuse which was diagnosed and changed in a matter of minutes when mechanics attended.

Although the SD relationship with workshop colleagues is on the whole positive, there is potential for improved communications. For example, a new high reach appliance was returned to the provider on two separate occasions with significant issues. On both occasions the appliance arrived back on station with no information from workshops on what modifications had been carried out to resolve issues. When contacted to address concerns, workshops staff were still unable to provide a clear picture. Operational staff also feel that if clear and concise communication came from workshops as to when they were going to uplift and drop off vehicles, then watch management teams could better prioritise workloads and manage what are already busy daily schedules.

Operational staff at Cowcaddens Fire Station describe an information vacuum surrounding the relocation of the existing workshop, which forms part of the same site. There is some speculation and concern that the station training tower which forms part of the workshop building could be lost should the workshop building or land be sold on, post move. Staff feel that if plans for the existing site were shared then it would put an end to the constant speculation on station and allow planning for future requirements. With plans for the new workshop underway we would hope that these issues are addressed by the project board going forward.

The investment in fleet is, in some cases, improving the quality of spare appliances now arriving on fire stations for temporary use when dedicated appliances are withdrawn for maintenance. Where this is apparent, it is reported to enhance business continuity and is seen in a positive light by SD and workshop staff alike. It is unclear whether spare appliances will be delivered fully equipped in the future or whether they will be delivered empty, necessitating an equipment changeover on every occasion, clarity is required on the Service's position.

At times, TED is not harmonised to the requirements involved in the introduction of new fire appliances and specialist vehicles. There are examples of vehicles not going into operational service for long periods of time due to:

- The requirement for a driver training instructor to assess each driver on a familiarisation drive.
- Capacity issues with the driver training section unable to facilitate familiarisation drives due to competing demands.
- Driver training fleet being old and unreliable with breakdowns causing delays in courses.
- In the case of a Hook Lift Prime Mover, driver operators were trained in its use but their skills had markedly decayed by the time the vehicle eventually arrived on station and had to re-train, resulting in further delays putting the vehicle into operational use.

Although not a Fleet issue but certainly a contributing dependency; SD staff acknowledge that the pressure placed on TED as a whole, and in particular the driver training section, cannot be understated. We have received reports across the country as to capacity issues facing the function. The SFRS has identified capacity issues and commissioned a root and branch review of training, one strand of which is driver training. In recognition of the capacity issues facing driver training, the Service has been proactive and initiated a pilot project to outsource driver training (Cat C) in Aberdeenshire and Aberdeen City LSO areas, which is running in tandem with and supplementing the SFRS driver training in the area. We hope that this pilot will be fully evaluated and if it proves successful, quickly rolled out to other exposed areas.

Whilst reviewing the end user experience it became apparent that size restrictions in some appliance bays will restrict the ability to house the new standard 18 tonne chassis pumping appliances. The SFRS should fully consider this whilst preparing its future vision and procurement strategy for full size pumping appliances, as in recent times, only 18 tonne chassis have been purchased to cover this resource. This restriction also affects the availability and siting of spare appliances in some areas, Dumfries and Galloway is given as an example of stations where smaller chassis types would be required to fit existing appliance bays. Some of these existing appliances are over the SFRS stated useful lifespan, but we are not aware of plans to purchase smaller chassis main pumping appliances.

4_Conclusions

4.1_Vehicle management strategy

We have made clear throughout this report that the SFRS Fleet Function is transitioning through what many would consider a challenging consolidation exercise moving from eight legacy facilities to four. At the time of writing, this transition is still ongoing with the Fleet Function continuing to maintain a 24hr/365 day per year service within the SFRS. However there are many areas which we feel require attention.

We found the workshops infrastructure, including facilities and equipment, to be good. A comprehensive options paper looking at the relocation of the Cowcaddens facility was approved by the SFRS Board with the preferred option of re-locating to Cambuslang. However, we are subsequently advised that this option is no longer viable due to existing contamination on the site and are disappointed that this was not identified at an earlier investigative stage. The SFRS are currently considering alternative options and we would expect the project board tasked with overseeing its delivery to ensure that lessons learned from previous projects are thoroughly scrutinised and incorporated into this new build facility.

In order to meet the challenges of Service Transformation and ensure the provision of a robust, modernising fleet fit for purpose in a fiscally uncertain future, the SFRS needs to provide a long-term strategic vision. We have seen little evidence of what a modern SFRS frontline fleet will look like and with Service Transformation taking shape we have concerns that the fleet requirements cannot keep pace with what may become a rapidly evolving transformation agenda. New concept asset projects need wider, more inclusive involvement at every stage, with strategy and financial commitment based on a thorough trial and evaluation of all products. That said, we identified good practice in the rationalisation of high reach vehicles and fleet cars which, when acted upon, will ensure future savings and provide Best Value solutions.

The SFRS has seen significant investment in new vehicles and equipment with the quality of the product complimented by staff, however with approximately one third of the current frontline fleet beyond anticipated renewal age we are concerned in the Service's ability to continue functioning within the current traditional model. Additional major investment will have to be found in order to fully modernise the fleet however this will have to be supported by a long-term vision and implementation plan. We would question the strategy of vehicle renewal based singularly on a defined age and would encourage a blended approach incorporating condition scoring. Driver training is a key partner involved in keeping appliances in operational service and in order to do this effectively, the driver training vehicle fleet should be modernised to increase reliability and include vehicles with new driver technology.

There is a strong culture of risk control through the AMLB strategically supporting asset-based projects, however underneath this, silo working exists. There is inconsistency over role and responsibility in many interdepartmental areas inhibiting joined up thinking, and leading to cross purpose working however subgroups are now formed to alleviate issues. There is also a lack of customer focus from Fleet to the end user which inhibits efficient interface and understanding of expectations by both partners. Use of the asset recording system Tranman is poor when viewed pan Scotland. The SFRS is investing in updated technology and training in order to develop and properly manage its full asset portfolio successfully and to maximise the performance and lifespan of all its assets ensuring Best Value.

4.2_Procurement of vehicles and equipment

The purchase of vehicles and equipment is hampered by an enforced year-on-year budget which in our opinion does not encourage research and development, thorough planning or ensuring Best Value and satisfaction in the delivered product.

We encountered a general feeling of frustration from most stakeholders in their dealings with the SFRS procurement processes. It is clear that the Procurement Department has been, in the past, understaffed. The difficulties in retaining and recruiting staff has been a major contributory factor to overall dissatisfaction in the department. It has also been a barrier to the amount and quality of procurements carried out. The department is now staffed to strength and we would expect overall departmental satisfaction to increase. In the case of Fleet and Equipment, there should be more cross public service procurement collaboration to ease burdens where commonality is shared.

There is evidence that a User Intelligence Group is commissioned during procurements, however its effectiveness could be improved as there is minimal frontline end user involvement and little evidence of a multi-departmental evaluation post-procurement to capitalise on any organisational learning. The inclusion of training to satisfy all departmental requirements is not generally included in procurements and as a result costs are incurred post project.

Restrictive internal procurement sign off when a cost ceiling is breached, adversely affects the throughput of vehicle servicing causing more vehicles to be out of service for longer periods of time.

Good practice is recognised in the area of procurement where one vehicle from every build type is independently tested to provide reassurance as to quality and safety of the product.

4.3_The role and operation of the workshop function

The Fleet Function is fully responsible for repair, maintenance and technical support for the vast and varied SFRS fleet and operational equipment. It collaborates to a limited extent with other organisations however we feel that the potential for more mutually beneficial collaboration exists.

It provides a 24hr/365 day per year service and now has an established footprint across Scotland to provide this service. It has adopted a two shift system incorporating core hours which is unpopular with the staff who work it and who produced anecdotal evidence that the shift system lacked effectiveness and efficiency. The Service gave assurances to staff that this system would be reviewed but at the time of writing this review is overdue by some months. Overall, workshops staff expressed a feeling of low morale.

The fleet manager has concerns over the age profile of his staff, reported to average 48 years of age. Staff also raised concerns over a perceived lack of succession planning and a lack of opportunities to work reduced or alternate, flexible working patterns. Recent attempts to attract

new staff, although ultimately successful, have been frustrated by the lack of opportunity to supplement the basic wage. This combined with the SFRS not utilising apprentices adds weight to the possibility of future staffing issues.

The information available to assess the performance of the Fleet Function is poor with no reliable performance management system in place and no way to inform the customer of the efficiency of vehicle throughput.

4.3.1 Health and safety at work

It is reported that the HS&W Department has a good relationship with the Fleet Function. But work to enhance H&S in the Fleet Function has been slow:

- A Fleet H&S handbook is developed but as yet not implemented.
- Managers are expected to carry out H&S duties with no specific training. A training gap analysis has been carried out with findings passed to the TED Department, with training only now beginning in earnest.
- No H&S training gap analysis has been carried out for mechanics or equipment technicians.
- Communications between both parties were poor whilst dealing with issues in the use of tools, with concerns over noise and 'white finger injury'.
- There is scope for workshops staff as a whole to embrace cultural improvement in H&S, increasing reporting of events in order to maximise organisational learning.

We feel that overall in the area of H&S there lies an organisational risk that the SFRS has to address. However, it is encouraging that lessons have been learned from the issues encountered with new vehicle technology where a Driver Safety Group has been set up with part of its remit to mitigate the issues encountered in this area.

4.3.2 Fleet management software

It was very apparent during our fieldwork that the fleet and equipment management software in use by the SFRS is used productively by only one workshop. The software used is Tranman, which is a recognised product, popular in the sector. The version currently in use by the SFRS is reported as being almost 10 years old and we are now advised that the SFRS are investing in an updated version in order to maximise usability and functionality. The training roll-out of the existing system is noted as being particularly poor with no standardised or consistency of usage across the Service. This inhibits the audit and reporting functionality, ultimately reducing the ability of managers to monitor and manage performance. Like any electronic system the information output is only as good as the information input. This again varies greatly from workshop to workshop with a distinct lack of detail of vehicles and equipment input, giving rise to concern that the SFRS may not be benefiting fully from the protection of inbuilt warranties. Tranman, at present, is not interfaced with the SFRS finance software Technology One and this prevents accurate budget control, tracking of parts, fuel costs and full life cost history of all assets. We commend the investment in the updated version of Tranman, however, it will still be heavily dependent on the information input to the system, the training given in its operation and its functionality when balanced against requirements. A great deal of work will have to be committed pre-project, in order to fully capitalise on this investment from its inception.

4.3.3 Vehicle maintenance

The SFRS has implemented a vehicle maintenance schedule which has taken time to sufficiently embed into all areas. Mechanics raised concerns as to the suitability of the schedule stating that it increased reactive repairs and work required during major inspections. Only time and thorough analysis will ultimately indicate the suitability of the chosen system. During our spot-checks we found historical evidence of regular missed targets, including a significant gap in a major inspection (although safety inspections were carried out) which constitutes an organisational risk. Our findings indicate that target efficiency in meeting the schedule is now getting steadily better and we would hope for this trend to continue as staff become more used to the requirements of the schedule. This would be further enhanced by a measure of target efficiency, through performance management reporting on out of service timescales for vehicles.

The spare parts ordering process in all but one workshop is inefficient, increasing the number of, and time that, vehicles are out of operational service. This is due to the lack of provision for spare parts stock held at locations for immediate use. We believe that this can be easily improved by adopting an imprest stocking system or similar, which we believe to be an industry standard cost effective solution.

Operational staff praised the defect reporting system stating that it was effective but also that it could be improved with a few simple alterations. They were also complimentary of the out of hours service provided by workshops stating that they had good access to mechanics when required via Operations Control, although it is noted that no national standard exists and the level of provision depends on the area. Good practice was noted in the use of local providers for maintenance and repairs in some remote rural areas and also the use of the FTA for safety inspections and quality management.

4.3.4 Vehicle movements

We found confusion in role and responsibilities concerning vehicle movements for maintenance and repairs. There is confusion between, Fleet, R&R and SD as to who has responsibility, causing a patchwork of arrangements across the country. It is our opinion that it is not the best use of a mechanic's time and skillset to carry out this role and many mechanic's productive hours are lost moving vehicles. Many productive hours are also lost due to a lack of efficiency in grouping inspections in remote areas resulting in mechanics travelling for many hours to carry out a single inspection.

In order for a vehicle to be taken into workshops for maintenance or repair it has to be replaced by one of equal capacity in order to maintain operational cover. Our findings suggest that although the SFRS claim to have an increased number globally, there are not enough spare vehicles at present to ensure resilience in all areas and that some of them are of a poor standard with inherent faults. This situation should gradually improve as new vehicles are brought into service. In some areas these vehicles arrive fully equipped allowing for a simple drive in, drive out solution, however in the vast majority of the country a full appliance changeover has to be carried out, which is time consuming. Clarity should be provided as to the vision for the way forward in this area. The MORR policy is also causing difficulty in the selection of spare vehicles due to the requirement for a familiarisation course before driving an unfamiliar vehicle, further limiting what is already a limited pool of vehicles.

4.3.5 Equipment issues

Each workshop has embedded equipment technicians for the care and maintenance of specialist equipment. This role is now consistent across all workshops with deficiencies in staffing having been made up from displaced trades. Due to the widespread requirements of the role, training has taken time with money from existing budgets having to be found. We found a lack of clarity over the line management responsibilities for equipment technicians with disagreement between workshops managers and the Scottish equipment manager as to who holds ultimate responsibility. We are concerned that this difference of opinion combined with the lack of a robust record keeping system has led to the equipment manager having difficulty in the management and control of the full portfolio of assets. This corporate risk is recognised by the SFRS which plans to embed compliance officers in the structure to mitigate the risk however at present no timescales are apparent. The SFRS are introducing technical information notes (TINs) which will standardise equipment testing requirements across Scotland.

In order to mitigate the issues surrounding appliance interchangeability, the SFRS is introducing a 'standard Scottish equipment stowage'. At the current rate of vehicle replacement this will take many years to transition. It is not envisaged that appliances already in service will be retrofitted to mirror this stowage which will only serve to prolong issues. We consider the standardisation of stowage to be of benefit to the overall versatility of the Scottish fleet and would encourage the SFRS to standardise it as soon and as widespread as possible.

4.4_End users – fire stations and specialist staff

Staff are very complimentary about the quality of new vehicle and equipment investment by the Service. That said, they feel that there is limited end user consultation, which if carried out, would help mitigate issues before appliances enter service. Overall we feel that collaboration with SD on vehicle and equipment projects is lacking and its enhancement is essential for fully inclusive project design and for the smooth transition of assets into operational service.

SD staff report that in general they enjoy a good relationship with workshops staff however communication could be improved upon. They stated that the defect portal and out of hours mechanical support worked well however in general they felt that vehicles were away for maintenance for longer periods than they were used to before. We think that this has direct links with mechanics' opinions that the lack of maintenance during the 13 week safety inspections allowed for a build-up of outstanding issues, increasing time spent on major inspections.

There is a general acknowledgement amongst SD staff that the driver training section is under a lot of pressure due to capacity issues and that it does not help that the appliances available are older, less reliable stock. The requirement for TED led vehicle familiarisation training has increasingly delayed the introduction of new vehicles and the placement and availability of spare appliances. We look on with interest to the outcomes of the training review with an expectation that some, if not all of these issues will be addressed. We would also be supportive of driver training having access to more modern vehicle stock in order to enhance course reliability and ensure early access to modern vehicle technologies for trainee drivers. We would also encourage, pending evaluation, more widespread use of external course providers in order to alleviate course congestion, in areas experiencing a continuing shortage of qualified drivers.

5_Recommendations

5.1_Vehicle management strategy

1. The SFRS should continue to invest in its workshops infrastructure in order to upgrade or maintain all facilities to a recognised national standard. Lessons learned from previous workshops projects should be incorporated into the new facility planned for the West SDA. The Project Board should maintain representative body and workforce participation. All workshop sites should work in greater collaboration in order to encourage joined up thinking and standardise national practices. There should be a clear delineation of roles and responsibility for all stakeholders in respect of the Fleet Function.

2. The Scottish Government has recognised that the SFRS inherited a substantial capital backlog from the eight legacy services and has worked closely with the Service to identify and provide levels of increased capital funding. However, in order to continue to address this backlog the SFRS should continue to endeavour to secure appropriate capital funding to support the Service's future requirements.

3. The SFRS should consider a review of the relationship between the Fleet Function and the end user with a view to a more focused approach on customer satisfaction, thus achieving greater accountability and understanding of expectations from both partners.

4. New concept vehicles and equipment should be thoroughly trialled and evaluated in order to ensure suitability, quality and Best Value before further roll-out. They should also be assessed for their impact on equality. New vehicle projects should incorporate a planned multi-departmental timeline to streamline a smooth transition into service. This will assist with a more efficient use of resources and increase the number and quality of spare vehicles.

5. The driver training fleet should be modernised to increase reliability and include vehicles with new technology, so drivers can develop appropriate skills from the outset or to meet the requirements of new technology.

6. The strategy for technology employed in the governance, management and control of assets should be reviewed to produce and implement a modernised, standard approach for all stakeholders.

7. All workshop managers should incorporate condition scoring into their fleet governance to better inform vehicle replacement assessment, rather than age alone. The SFRS should review its Transport Strategy to better reflect the inclusion of condition scoring into the overall process.

5.2_Procurement of vehicles and equipment

8. The SFRS should embrace greater interdepartmental collaboration in respect of procurement of new vehicles and equipment with more focus on workshop and end user involvement. This should include multi-departmental evaluation following each procurement process, in order to compile organisational learning to inform and improve future project management.

9. The SFRS should continue to ensure efficient workforce planning in respect to procurement staff with the monitoring of market allowances and horizon scanning for efficient succession planning. In order to ease capacity issues, the SFRS should investigate opportunities for collaborative procurement with other public sector bodies where there is commonality.

10. The Procurement Department should work closely with TED in the inclusion of training packages within procurements to benefit all aspects of training. TED should then manage its provision.

11. The Procurement Department should work closely with workshops managers to maintain a quick and easy method of authorising the throughput of spare parts to reduce the time that vehicles are out of service awaiting spare parts sign off.

5.3_The role and operation of the workshop function

12. The SFRS should investigate further collaboration opportunities with emergency service partners. For example shared maintenance and repair contracts in remote areas, shared workshops space, shared peer review and quality assurance and procurement of spare parts.

13. The SFRS should undertake a review of working practices within the Fleet Function with a view to maximising overall staff output, improve staff development, secure Best Value and improve staff morale. The SFRS should also consider a national on-call procedure for mechanics.

14. The SFRS should closely monitor retirement profiles and recruit effectively to avoid long-term staff reduction and a resultant decrease in production. The SFRS should also investigate the use of apprenticeships within the Fleet Function to promote a skilled workforce for the future.

15. The SFRS should consider what information the Fleet Function shares in terms of performance management and consider whether it best meets the needs of its customers.

5.3.1 Health and Safety at Work

16. The Fleet H&S handbook should be implemented across all workshops sites. This would assist in workshops staff embracing cultural improvement in H&S and increasing near miss reporting in order to maximise organisational learning.

17. A training plan stemming from the H&S training gap analysis should be fully implemented for workshops managers in order to mitigate this organisational risk. Also a gap analysis on H&S training should be carried out for mechanics and equipment staff in order to design and implement a training plan which will again mitigate organisational risk.

5.3.2 Fleet management software

18. The SFRS having invested in an upgraded version, should fully assess whether Tranman is a suitable platform on which to build the management of all of its hard assets for the future. If so, it should give due consideration to future proof the system by the introduction of, a national standard for its usage. This should be supported by a thorough data cleansing programme and a training package for all staff who are required to use it.

19. The SFRS should explore with vehicle and equipment providers, the provision of a cover sheet which would detail all data input requirements for Tranman, including all separate warranties to allow for simple, standardised upload onto Tranman.

20. As long as the SFRS continue to use Tranman it should ensure that it is interfaced with Technology One in order to accurately manage budgets and recognise full life costs.

21. Wi-Fi should be upgraded to cover all workshops areas in order to optimise the use of Wi-Fi enabled workshop equipment.

22. A tracking system should be considered for the full fleet in order to improve efficiency in tracking and managing vehicle stock, the security of lone workers and to guard against vehicle misuse and theft.

5.3.3 Vehicle maintenance

23. Vehicle servicing in all areas should be fully audited in order to identify any major omissions, with an action plan generated to mitigate organisational risk. This should be coupled with a full evaluation of the vehicle maintenance schedule and inspection sheets in order to fully assess their suitability and cost effectiveness over the long-term.

24. Workshops managers should ensure the availability and visibility of vehicle maintenance schedules so that SD can implement measures to limit the operational impact of vehicle reductions or changeovers. The availability and location of this schedule should be advertised to all end users.

25. The SFRS should consider adopting a standardised imprest stocking system or similar, across all of its sites to greatly enhance efficiency. At the time of writing we understand that Police Scotland and the Scottish Ambulance Service are tendering together for an Imprest system and the SFRS should explore the potential to work in partnership with this project.

5.3.4 Vehicle movements

26. The SFRS should introduce national guidance on responsibility for the movement of vehicles for service and maintenance. It is our opinion that this work is not the best use of a mechanic's or equipment technician's time.

27. Consideration should be given to grouping vehicle inspections in remote rural areas, to cut down on travel time and improve efficiency. Again, working in partnership with other emergency services could provide benefit. Consideration should also be given to outsourcing more work in remote rural areas, when it is not cost effective to do so in-house.

28. Policy needs to be clear on the requirement, or not, of TED led driver familiarisation when driving an unfamiliar appliance. This aspect has been a contributory factor of appliance availability issues and in particular the use and movement of spare appliances around the country.

5.3.5 Equipment issues

29. Clarity should be given over who line manages equipment technicians in order to satisfy clear governance of their role.

5.4_End Users – fire station and specialist staff

30. Communications between workshop staff and SD should be improved in order to give staff confidence in the state of vehicle repair and better plan for vehicle reduction and changeover at fire stations. The procedure for mechanics signing onto fire stations and recording when defects are fixed should be adhered to.

31. The SFRS should establish a national standard for the provision of spare appliances and whether vehicles will be delivered fully kitted with equipment or not.

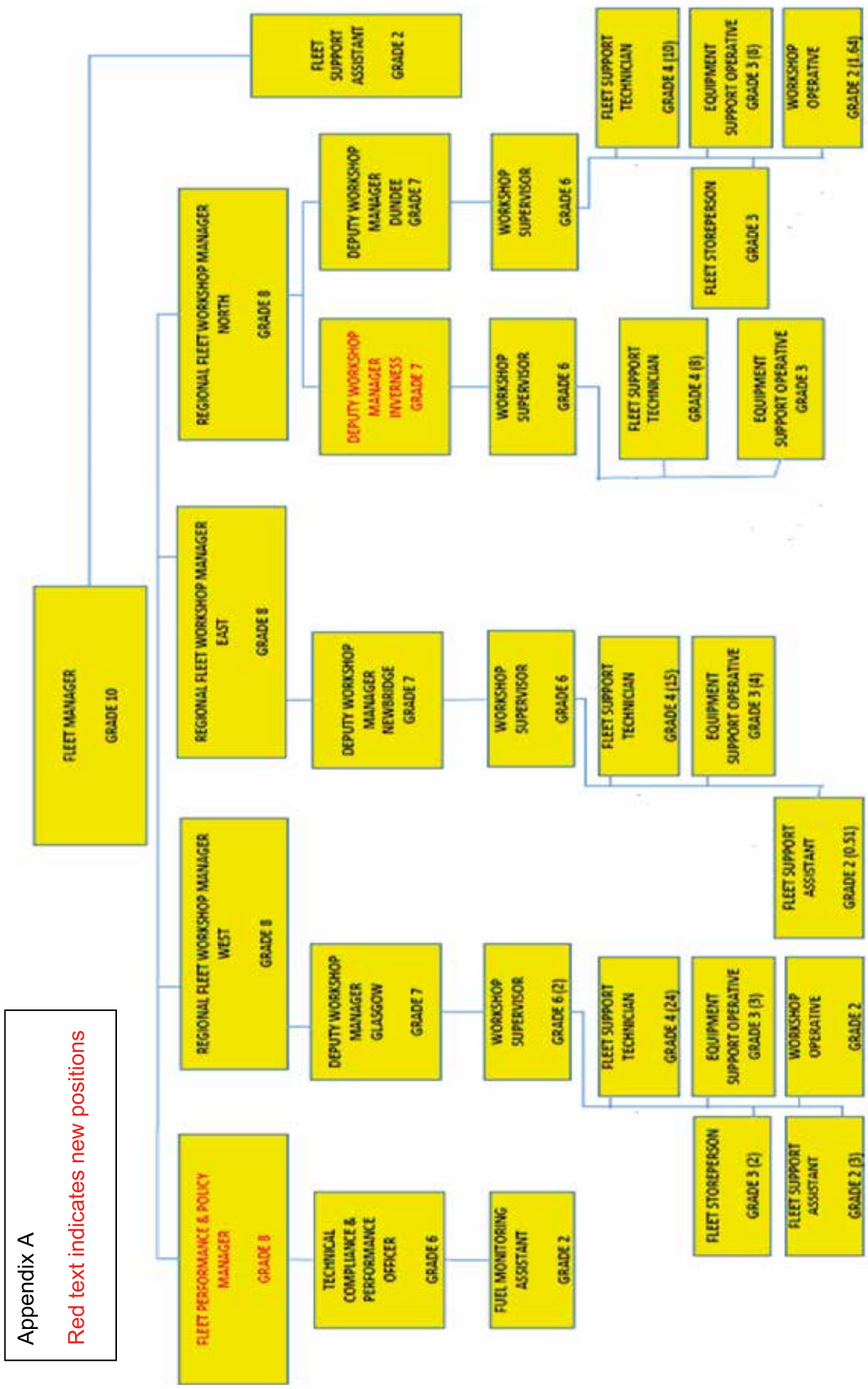
32. After a sufficient period of time has elapsed, the SFRS should carry out a detailed evaluation of the introduction and effectiveness of the RRUs introduced into operational service, in order to inform future provision. In general, greater collaboration between R&R workshop and SD staff on vehicle and equipment projects is desirable.

Glossary and abbreviations

An explanation of abbreviations used can be found in the table below.

AMLB	Asset Management Liaison Board
ARC	Asset Resource Centre
CO	Chief Officer
CPD	Continuous Professional Development
DACO	Deputy Assistant Chief Officer
DCFO	Deputy Chief Fire Officer
ESP	Electronic Stability Programme
FD	Flexible Duty
FTA	Freight Transport Association
HMFSI	Her Majesty's Fire Service Inspectorate
H&S	Health and Safety
HS&W	Health Safety and Wellbeing
ICT	Information and Communications Technology
ISO	International Organization for Standardization
LGV	Large Goods Vehicle
MORR	Managing Occupational Road Risk
MTA	Marauding Terrorist Attack
PPE	Personal protective equipment
PUWER	Provision and Use of Work Equipment Regulations 1998
R&D	Research and Development
R&R	Response and Resilience: operational planning to ensure the right resources are available at the right time and in the right locations.
RDS	Retained Duty System
RRU	Rapid Response Unit: a smaller more versatile appliance for use in a rural environment
SD	Service Delivery: front end delivery by operational staff
SDA	Service Delivery Area: the SFRS is organised into three geographical areas for service delivery (East, North and West)
SFRS	Scottish Fire and Rescue Service
SLT	Strategic Leadership Team
TED	Training and Employee Development
TIN	Technical Information Note
UHP	Ultra High Pressure
VCA	Vehicle Certification Agency: the designated UK national authority for approving new road vehicles
2005 Act	The Fire (Scotland) Act 2005

Appendix A



Appendix A

Red text indicates new positions

ISBN: 978-1-910349-23-6

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PPDAS565670 (05/19)