



**Dorset  
Fire & Rescue  
Service**

► **Final Report : Service Exercise  
2014**

**Issued to:** Area Manager Spring  
Group Manager Graham

**Date of Report:**

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*Version 1*

## **Management Summary:**

On 18 October 2014 DFRS conducted a Service exercise that involved personnel from 18 stations, WMTC staff, representatives from the Operational Assets and IT departments, Fire Control, over 50% of the flexi officers rota, DFRS volunteers, Forestry Commission and National Trust staff, Basingstoke College students and a variety other individual subject matter experts. In all approximately 120 people were involved in the exercise, in addition there were also guest observers from the LRF and Dorset Fire Authority.

The overarching aim of the exercise was to test the effectiveness of the Wildfire procedures and training that had been introduced during 2013/14. The exercise split the Level 1 and Level 2/3 command elements into two bespoke streams. The Level 1 activities were monitored by Bronze Officers or subject matter experts whilst the Level 2/3 activity was monitored by Silver and Gold level officers.

Following the exercise and subsequent gathering of feedback there do not appear to any areas of risk that need to be raised as a significant concern. As would reasonably be expected following an exercise of this level a number of areas that could be improved upon were highlighted. All of the areas identified for improvement are listed at the end of this report.

## **Summary of Significant Corporate Risks:**

The following table records the inherent risk (the risk of exposure with no controls in place) and the Professional Standards manager's initial assessment of the risk (the risk exposure on the assumption that the current controls are operating effectively) captured at the outset of the audit. The final column of the table is the Professional Standards manager's summary assessment of the risk exposure at Corporate level after the control environment has been tested. All assessments are made against the risk appetite agreed by heads of service.

Areas identified as significant corporate risks, i.e. those being assessed as 'high' or 'very high' risk areas in line with the definitions attached should be addressed as a matter of urgency.

Risks		Inherent Risk Assessment	Managers Initial Assessment	Auditors Assessment
1.	The introduction of new Wildfire procedures and training had not been effectively understood resulting in a risk to firefighter safety.	H	M	L
2.	The ability of crews to navigate utilising grid references via an MDT is not at an appropriate level resulting in a risk to DFRSs ability to manage a significant Wild/heath fire incident effectively.	M	L	M
3.	DFRS level 2/3 commanders are unfamiliar with the terminology and risks associated with a large	H	L	L

	wildfire/heath fire incident resulting an inability to effectively manage such an incident.			
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### **Summary of Significant Findings:**

The following were identified as key findings for the service and therefore categorised, in accordance with the definitions attached, as a level '4' or '5' priority in the action plan.

No significant findings.

Further details of audits' findings can be viewed in the full audit report, which follows this Management Summary.

### **Overall Assurance Rating:**

▲★★★ I am able to offer reasonable assurance as most of the areas reviewed were found to be adequately controlled. Generally risks are well managed but some systems require the introduction or improvement of internal controls to ensure the achievement of objectives.

## **Detailed Exercise Report:**

### **Objectives and Risks**

The key objective of the service and risks that could impact on the achievement of this objective have been identified below:

#### **Objective:**

To assess the ability of DFRS to respond effectively to a significant wildfire/heath-fire incident following the guidance published during 2013/14 (SIS Standard Operating Procedures FF 4.1).

#### **Risks:**

1. The introduction of new Wildfire procedures and training had not been effectively understood resulting in a risk to firefighter safety.
2. The ability of crews to navigate utilising grid references via an MDT is not at an appropriate level resulting in a risk to DFRSs ability to manage a significant Wild/heath fire incident effectively.
3. DFRS level 2/3 commanders are unfamiliar with the terminology and risks associated with a large wildfire/heath fire incident resulting an inability to effectively manage such an incident.

#### **Method and Scope**

This exercise was conducted using the following parameters:

The exercise split the Level 1 and Level 2/3 command elements into two bespoke streams:

1. The Level 1 activities saw the Service off-road vehicles working as combined units of one main pumping appliance and one supporting vehicle. The combined units were tasked to navigate between set locations and participate in a Wildfire related activity (including live a fire activity) at each location. The units movements were monitored and directed by the CSU and a Command Support Officer.
2. The Level 2/3 activities saw a simulated Wildfire Incident being run by a Command Team from a BASU. The exercise involved injects from local land managers.

Specifically the exercise was designed to:

1. Test the ability of Level 1 commanders and crews to navigate off road terrain utilising OS grid references and MDT.
2. Test the practical understanding of the recently introduced Wildfire firefighting (and supporting) techniques by Level 1 commanders and crews by monitoring their responses to six bespoke scenarios.
3. Test the understanding of the recently introduced Wildfire Command and Control strategies by Level 2/3 commanders.
4. Test DFRS ability to integrate and utilise local land managers to assist with Wildfire incidents (Level 2/3 activity)

5. Test the resilience of Command Support capabilities by utilising both the CSU and BASU as Command Support vehicles.
6. Test the ability of the HVP to act as a water main at a remote incident.

### Method / Lines of Enquiry:

Assessment area	Method/activity	Risk based on evidence available	Assessment summary
Level 1 – Sector 1 Live burn	Crews were required to demonstrate an understanding of the LACES protocol and the correct method of extinguishing a flank/head fire.	L	Of the three crews that completed this activity all three demonstrated the appropriate firefighting techniques. Two of the three crews were fully competent in the use of the LACES protocol and the other was able to utilise the protocol with some prompting (Appendix 2)  On the evidence available it would appear that no further action beyond normal maintenance of skills is required.
Level 1 – Sector 2 HVP as a water main/MDT area measurement	Crews were required to demonstrate knowledge of the HVP capability to act as a water main and to estimate the size of a given area utilising the MDT.	L	Of the three crews that completed this activity two of the crews demonstrated a limited understanding of the HVP capability to act as a water main and one had no knowledge. All three were able to replenish their water supply from the HVP. With regard to their ability to the use of the MDT to measure a defined area two of the crews were able to complete the task unaided and the third required minimal assistance (Appendix 3).  On the evidence available there is some room to improve the knowledge base of crews relating to the capabilities of the HVP.
Level 1 – Sector 3 Vehicle self-recovery	Crews were required to demonstrate the ability to implement the recently published guidance for Vehicle Self Recovery.	L	Of the five crews that completed this activity only two were familiar with the published guidance, however with limited guidance all five were able to demonstrate a safe self-recovery utilising techniques learnt for other recovery activities (Appendix 4).  On the evidence available there is room to improve awareness relating to the 'new' self-recovery guidance.
Level 1 – Sector 4 Hot spot identification and extinction equipment (knapsack sprayer, handbag pump, TIC)	Crews were required to demonstrate an awareness and understanding of the equipment available to identify and extinguish hotspots.	L	Unfortunately only one crew located and completed this activity. This crew demonstrated a good awareness of the additional equipment available within the Service to identify and extinguish hot spots (Appendix 5).  Unfortunately it is not possible to give an assurance or make a recommendation for this activity based on the knowledge of a single crew.

<p>Level 1 – Sector 5 Landscape recognition</p>	<p>Crews were required to demonstrate an understanding of: the WiPS protocol, vegetation/topography and their influence on fire development, and appropriate use of control lines as a firefighting tactic.</p>	<p>L</p>	<p>Of the four crews that completed this activity two gave “confident” or “strong” responses to the WiPS question whilst the other two demonstrated “good” knowledge once prompted. All four crews were able accurately identify different vegetation/topography types and their effects on fire development. All four crews were able to accurately describe where they would place control lines as part of their firefighting tactics (Appendix 6).</p> <p>Based on the evidence available crews would appear to have a good knowledge of the heathland environment and its influence on fire development.</p>
<p>Level 1 – Sector 6 Demonstration of Forestry Commission equipment</p>	<p>As part of the exercise crews attended a demonstration of Forestry Commission equipment available to an IC on request.</p>	<p>N/A</p>	<p>Unfortunately due to unforeseen circumstances no crews were able to access this demonstration.</p>
<p>Level 1 – use of MDT to navigate utilising grid references only</p>	<p>The participating crews were given 12 figure grid references to identify the location of the various Sectors/activities. They were required to utilise the MDT to navigate between locations.</p>	<p>L</p>	<p>Three of the six appliances navigating using their MDTs failed to correctly identify their first location. Whilst the other three appeared familiar with the functionality of the MDT and successfully located their sectors.</p> <p>On investigation one of the three crews that failed to successfully locate their sectors had a fault on their MDT. Once this had been identified the crew utilised an OS map and were able to successfully navigate for the remainder of the exercise. The other two crews required remedial training input before they were able to proceed. (Appendix 7)</p> <p>Based on the evidence available it would appear there is still a need improve the knowledge of operational crews on the wider functionality of the MDT.</p>
<p>Level 1 – CSU and BASU functionality and crew competence</p>	<p>The CSU and crew from Hamworthy were utilised to manage the level 1 exercise.</p> <p>NB. Due to unforeseen circumstances it was not possible to test the use of the BASU.</p>	<p>M</p>	<p>Unfortunately due to a late illness only two staff (no Supervisory Manager) were able to attend the exercise. The competency levels varied with one being fully conversant with the IT available and the requirements of Command Support, the other had some development needs.</p> <p>All equipment (hardware and software) required for the exercise worked. However a workstation server crashed on a couple of occasion and one airwave radio was found to be defective. Overall the CSU and crew were able to provide adequate command support for the incident (Appendix 8).</p>

			<p>Based on the evidence provided there is room to improve both the crew competence and the on board facilities within the CSU.</p> <p>The functionality of the BASU was not tested on this occasion, however it had been utilised successfully at a large fire (Landfill waste site) just prior to the Service Exercise.</p>
<p>Level 2 – Ability of a command team to operate effectively at a large wildfire/heath-fire</p>	<p>A table top/CAL exercise was conducted utilising a full command team with a Level 2 officer as the IC.</p>	L	<p>This part of the exercise was monitored by a Level 3 manager in the normal manner. However for the purposes of this exercise the monitoring was directed at the overall performance of the Command team rather than the individual IC as would be the normal (Appendix 9).</p> <p>All areas of Incident Command considered appropriate for Level 2 Wildfire/heath-fire were observed.</p> <p>The majority of areas observed attracted positive comments e.g.</p> <ul style="list-style-type: none"> <li>• Key Risk Evaluation – RC also asked for safety officers and utilised the WiPS protocols.</li> <li>• Evaluation of impact of incident on DFRS, environment etc. – RC considered the use of foam and contacted the Environment Agency.</li> <li>• Safe Systems of work – Sectorisation agreed throughout used correct wildfire terminology. Ground/slope and aspect considered along with crowning.</li> <li>• Effective communications – Wildfire jargon and terminology was kept to a minimum and explained to others when necessary.</li> </ul> <p>Areas identified for development were:</p> <ul style="list-style-type: none"> <li>• Evaluation of impact of the incident on DFRS, environment, local community and other organisations – Decided to collocate with the Forestry Commission but this could have taken place sooner which may have increased the efficiency of briefings.</li> </ul> <p>Based on the evidence available the Level 2 Command Team were operating at an appropriate level, “The command exercise demonstrated a thorough understanding of dealing with Wildfire incidents by the Incident Commander and the wider command team.”</p>
<p>Level 3 – Ability of a command team to operate effectively at a large</p>	<p>A table top/CAL exercise was conducted following on directly from the Level 2 exercise with</p>	L	<p>This part of the exercise was monitored by a Level 4 manager in the normal manner. However for the purposes of this exercise the monitoring was directed at the overall performance of the</p>

wildfire/heath-fire	Level 3 officer as the IC.	<p>Command team rather than the individual IC as would be the normal (Appendix 10).</p> <p>All areas of Incident Command considered appropriate for Level 3 Wildfire/heath-fire were observed.</p> <p>The majority of areas observed attracted positive comments e.g.</p> <ul style="list-style-type: none"> <li>• Confirmation of Hazards – There was visible recognition of the hazards identified and knowledge of the effects of wind change.</li> <li>• Key Risk Evaluation – There was suitable and sufficient regards shown for the intensity of work that would be undertaken by crews.</li> <li>• Obtained technical/professional advice – Forestry Commission SMA requested, and fully utilised as tactical advisor for the Command Team.</li> <li>• Evaluation of impact of the incident – All necessary partners identified for Op Link and in theory initiated.</li> <li>• Safe Systems of work – LACES protocol discussed and confirmed. ARA requested and produced. Checked very thoroughly by AF and only signed once additional control measures and rescoring had taken place.</li> </ul> <p>Areas identified for development were:</p> <ul style="list-style-type: none"> <li>• Resource Evaluation – Greater and earlier consideration of HVP might have been of benefit.</li> <li>• Obtained technical/professional advice – The need for command briefings with partner agencies at set and prescribed intervals should not be overlooked.</li> <li>• Confirm priority actions and objectives – Priority actions and objectives were discussed by the Command Team but not confirmed at multi-agency meetings.</li> <li>• Effective Communication – Earlier consideration of the use of social media may have been an advantage.</li> </ul> <p>Based on the evidence available the level 3 Command Team were operating at an appropriate level, “In summary, a testing exercise which the Incident Commander and the Command Team dealt effectively, utilising and displaying new terminology and techniques that appeared imbedded in thinking and practice.”</p>
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## **Out of scope findings**

Whilst not part of the objectives for this exercise it is worthy of note that five out of the six participating appliances and all of the supporting vehicles and appliances were specialist 4x4 vehicles. The appliance from Redhill Park fire station being the exception.

The driving conditions were reasonable, there had been considerable amounts of rainfall in the weeks leading up to the exercise but in the days immediately prior to and on the day of the exercise were dry.

The crews all followed routes that had been agreed as suitable for Fire Service vehicles. Despite this the Redhill appliance, through no fault of the crew, found they were unable navigate successfully and ended up with the vehicle sliding off of the defined route and requiring recovery using a tracked vehicle.



## Recommendations

## Action Plan

The Agreed Action Plan provides a formal record of points arising from this audit and, where appropriate, the action management has agreed to take and the timescale in which the action will be completed. All findings have been given a priority rating between 1 and 5, where 1 is low and 5 is high.

Finding	Recommendation	Priority Rating	Risk Rating	Management Response	Responsible Officer	Implementation Date
<b>Objective: To assess the ability of DFRS to respond effectively to a significant wildfire/heath-fire incident following the guidance published during 2013/14 (SIS Standard Operating Procedures FF 4.1).</b>						
<b>1. 1. Risk: The introduction of new Wildfire procedures and training had not been effectively understood resulting in a risk to firefighter safety.</b>						
Reasonable assurance has been provided by this exercise, no further recommendations						
<b>2. 1 Risk: The ability of crews to navigate utilising grid references via an MDT is not at an appropriate level resulting in a risk to DFRSs ability to manage a significant Wild/heath fire incident effectively.</b>						
Based on the evidence available it would appear there is still a need improve the knowledge of operational crews on the wider functionality of the MDT.	Further training provided to crews with regards the operation of the MDT to ensure its full functionality is available	2	L			

Finding	Recommendation	Priority Rating	Risk Rating	Management Response	Responsible Officer	Implementation Date
<p><b>3. 1. Risk: DFRS level 2/3 commanders are unfamiliar with the terminology and risks associated with a large wildfire/heath fire incident resulting an inability to effectively manage such an incident.</b></p>						
<p>Reasonable assurance has been provided by this exercise, no further recommendations</p>						
<p><b>Findings not related to Risks</b></p>						
<p>Based on the evidence provided there is room to improve both the crew competence and the on board facilities within the CSU.</p>	<p>Provide further training for the CSU crew at 17</p>	<p>2</p>	<p>M</p>			
<p>Redhill appliance, through no fault of the crew, found they were unable navigate successfully and ended up with the vehicle sliding off of the defined route and requiring recovery using a tracked vehicle.</p>	<p>Tracks identified as suitable for fire appliances need to be re-assessed. crews need to be able to make a risk assessment based on the environment presented to them.</p>	<p>2</p>	<p>L</p>			

## Audit Framework Definitions

### Control Assurance Definitions

<b>Substantial</b>		I am able to offer substantial assurance as the areas reviewed were found to be adequately controlled. Internal controls are in place and operating effectively and risks against the achievement of objectives are well managed.
<b>Reasonable</b>		I am able to offer reasonable assurance as most of the areas reviewed were found to be adequately controlled. Generally risks are well managed but some systems require the introduction or improvement of internal controls to ensure the achievement of objectives.
<b>Partial</b>		I am able to offer Partial assurance in relation to the areas reviewed and the controls found to be in place. Some key risks are not well managed and systems require the introduction or improvement of internal controls to ensure the achievement of objectives.
<b>None</b>		I am not able to offer any assurance. The areas reviewed were found to be inadequately controlled. Risks are not well managed and systems require the introduction or improvement of internal controls to ensure the achievement of objectives.

### Categorisation Of Recommendations

When making recommendations to Management it is important that they know how significant the recommendation is to the service. There should be a clear distinction between how we evaluate the risks identified but scored at a corporate level and the priority assigned to the recommendation.

Priority 5: Findings that are fundamental to the integrity of the Service's critical processes and require the immediate attention of management.

Priority 4: Important findings that need to be resolved by management.

Priority 3: The accuracy of records is at risk and requires attention.

Priority 2: Minor control issues have been identified which nevertheless need to be addressed.

Priority 1: Administrative errors identified that should be corrected. Simple, no-cost measures would serve to enhance an existing control.

### Definitions of Corporate Risk

<b>Risk</b>	<b>Reporting Implications</b>
<b>Low</b>	Issues of a minor nature or best practice where some improvement can be made.
<b>Medium</b>	Issues which should be addressed by management in their areas of responsibility.
<b>High</b>	Issues that we consider need to be brought to the attention of senior management.
<b>Very High</b>	Issues that we consider need to be brought to the attention of both senior management and the Audit Committee.