**Rescue and Fire Fighting Service (RFFS)** 



# Frameworks for Structured Learning Programmes

**Information Paper** 

IP-2

Frameworks for Training Providers who wish to provide Structured Learning Programmes (SLPs) for RFFS personnel

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#### Preface

The following document is made available on the Civil Aviation Authority (CAA) website to promote and develop best practice within the RFFS. It is offered to training providers to assist them in developing syllabi for Structured Learning Programmes or Structured Assessment Programmes.

This paper has been prepared in cooperation with the Airport Operators Association (AOA) Rescue and Fire Fighting (RFF) Working Group.

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#### 1 Introduction

The following Appendices contain frameworks for training providers who wish to construct SLPs for RFFS personnel. The frameworks should be read alongside the referenced occupational standards from CAP 699.

SLPs should be seen as part of an overarching development programme for staff. They will provide staff with the acquisition or refreshing of skills in a training environment. These skills will need to be applied and adapted to the risks of the particular airport. All staff should have a development plan to refresh, enhance or attain additional skills to enable them to be fully competent in their current role or any role that they may progress to.

## Appendix A

## Structured Learning Programme Framework

## Supervisor - Initial (Low Category)

## Aim

The aim of the SLP is to allow potential or new supervisors to develop the skills necessary to manage a low category RFFS unit.

This SLP shall deliver the knowledge requirements of the occupational standards in AWM1 - 7 of CAP 699 relevant to a low category RFFS unit.

#### Attendance Criteria

Ideally candidates should attend this course before they operate in a supervisory role or as soon as practicable after they take up a supervisory role.

## Pre-Study

The following shall be a pre-course requirement:

• Knowledge of CAP 168, Chapter 8, Appendix 8B.

#### **Technical Content**

- CAP 168, Chapter 8, Appendix 8B
- Training supervision and management
- Tactics and techniques for low category aircraft incidents
- Incident Command System
- Management of media, equipment, vehicles, procedures and records
- Case studies
- Hazard identification and risk assessment

#### **Delivery Method**

The course shall cover the technical content in the classroom followed by the application of tactics and techniques and their supervision by practical exercises.

#### Assessments

Assessments against the requirements of AWM1 - 7 relevant to low category aerodromes shall be carried out and recorded.

#### Length of Course

It is expected the course will be in the region of 35 hours (excluding meal breaks).

#### Validity

Certificates of Competence will be valid for four years, during which time competence shall be maintained as part of ongoing training as set out in CAP 168, Chapter 8, Appendix 8B, Section 12.

## Appendix B

## Structured Learning Programme Framework

#### Supervisor – Revalidation (Low Category)

## Aim

The aim of the SLP is to allow supervisors to refresh and demonstrate the skills necessary to manage a low category RFFS unit.

This SLP shall deliver the knowledge requirements of the occupational standards in AWM1 - 7 of CAP 699 relevant to a low category RFFS unit.

#### Attendance Criteria

Candidates shall attend this course to revalidate their competence in a supervisory role at an RFFS unit.

## Pre-Study

The following shall be a pre-course requirement:

• Knowledge of CAP 168, Chapter 8, Appendix 8B.

#### Technical Content

- CAP 168, Chapter 8, Appendix 8B
- Training supervision and management
- Tactics and techniques for low category aircraft incidents
- Incident Command System
- Management of media, equipment, vehicles, procedures and records
- Case studies
- Hazard identification and risk assessment

#### **Delivery Method**

The course shall refresh the technical content in the classroom followed by the application of tactics and techniques and their supervision by practical exercises.

#### Assessments

Assessments against the requirements of AWM1 - 7 relevant to low category aerodromes shall be carried out and recorded.

#### Length of Course

It is expected the course will be in the region of 28 hours (excluding meal breaks).

#### Validity

Certificates of Competence will be valid for four years, during which time competence shall be maintained as part of ongoing training as set out in CAP 168, Chapter 8, Appendix 8B, Section 12.

## Appendix C

# Structured Learning Programme Framework

## Firefighter - Initial

## Aim

The aim of the SLP is to train new firefighters in both the technical and practical skills for the effective deployment to deal with an aircraft incident utilising the 'safe person concept'.

This SLP shall deliver the requirements of the occupational standards in AFF1-12 of CAP 699.

## Attendance Criteria

Candidates should attend this SLP before they operate as a competent crew member. Candidates should be medically fit in accordance with the ODPM guidance 'Medical and Occupational Evidence for Recruitment and Retention in the Fire and Rescue Service'.

## Pre-Study

Whilst there are no pre-course study requirements, any knowledge of fire service operations will assist with this intensive programme. If candidates are able to carry out pre-study they should concentrate on study notes covering the technical subjects.

## Technical Content

- Dynamic risk assessment
- Safe person concept
- Fire service equipment, technical information and practical use
- Words of command
- Manual handling
- Science of fire
- Compartment fire behaviour
- Medical First Aid
- Aircraft construction
- Fuels and fuel tanks
- Fire fighting tactics and techniques
- Organisation of the Incident Ground
- Radio procedures
- Fire safety at airports
- Emergency planning
- Case studies
- Breathing apparatus use and control procedures
- Search techniques
- Practical exercises

## **Delivery Method**

The SLP shall be heavily biased to practical mentored instruction. Clear, concise and relevant notes shall be provided to underpin the subject areas with the emphasis on practical acquisition and development of skills.

## Assessments

Continuous assessments against the requirements of AFF1-12 shall be carried out and recorded.

## Length of Course

It is expected the course will be in the region of 210 hours (excluding meal breaks).

## Validity

- 1. Through a local training programme and revalidation at an Approved Training Provider (ATP);
- 2. Maintained through an accepted MOC scheme.

## Framework of Firefighter Initial Course

The following table sets out the suggested subjects and the percentages of theory or practical delivery during the course. It also suggests the subjects that would need to be assessed locally before someone rides an appliance. The last column suggests those subjects that would be covered as part of the person's development.

Subject	% Theory	% Practical	Pre-riding	In Development
Initial Course Content	-			•
HEALTH & SAFETY	Yes	Yes	Based on	
Safe Person Concept	80	20	local risk	
• DRA			assessment	
Words of command, fireground communication				
Manual Handling				
• PPE				
INTRODUCTION TO REGULATORY FRAMEWORK	100			Yes
ICAO	100			103
EASA				
CAPs				
CAPS     DRILLS AND EQUIPMENT	Yes	Yes	Yes	
	30	70	165	
Hydrant	30	70		
• Pump				
Hose				
Ladders				
Appliance / Monitor ops				
To include:				
Construction				
Safety features				
Words of command				
Terminology				
Teamwork				
Test and Inspections				
HYDRAULICS	Yes	Yes		
	90	10		
KNOTS AND LINES	Yes	Yes		
	10	90		
MEDIA	Yes		Yes	
Water	100			
Foam				
<ul> <li>Gaseous Agent CO2</li> </ul>				
Dry powder				
PUMPS AND PRIMERS AND EXTINGUISHING SYSTEMS	Yes	Yes	Yes	
Pump construction	80	20		
Primers	[Basic			
Pump gauges	principles]			
Gauge reading				
Foam Metering Systems				
Fire Extinguishers	20	80		
Complementary systems	20	00		
LPP				
HP hosereels				

AIRCRAFT - FIXED WING, HELICOPTERS, FREIGHT &	Yes	Yes		Yes
MILITARY, THEORETICAL INPUT	90	10		
Construction				
Materials     Fuel Tanks				
Engine     Underserringen				
Undercarriages				
Internal     Systems				
Systems				
Assisted Escape Systems     Ordeance				
Ordnance     AIRCRAFT - FIXED WING, HELICOPTERS, FREIGHT &	Vac	Voc	Voc	
MILITARY, PRACTICAL INPUT	Yes 10	Yes 90	Yes	
Construction	10	30		
Construction     Materials				
Fuel Tanks				
Engine				
Engine     Undercarriages				
Ondercarnages     Internal				
Systems				
Assisted Escape Systems				
Ordnance				
HAZMATS	Yes	Yes		
Fuels, oils and lubricants	80	20		
<ul> <li>Fuels, ons and lubricants</li> <li>Cargo</li> </ul>		20		
Cargo     Composite Fibrous Materials				
Biohazards				
Decontamination				
				Yes
COMMUNICATIONS	Yes	Yes	Yes	Yes
Including CAP 413	50	50		
INCIDENT COMMAND SYSTEM	Yes	Yes	Yes	Yes
Crew Approach	70	30		
Risk Assessment				
Scene Safety				
PEMS				
Post-Incident Considerations				
RESCUE EQUIPMENT AND SAFETY PROCEDURES	Yes	Yes	Yes	Yes
Generic	30	70		
			<b> </b>	
SUPPORTING PEOPLE IN DISTRESS	Yes	Yes		Yes
Initial casualty care	50	50		
One day Appointed Persons module				ļ
TACTICS AND TECHNIQUES, EXERCISES AND SCENARIOS	Yes	Yes		
Fixed wing	90	10		
Rotary				
Military				
Types of incidents				
Difficult Environs				
EXERCISES:	Yes	Yes		
Should build progressively in complexity and size, and should	10	90		
include:				
Engine				
Undercarriage				
Search     Substance				
External Fire Fighting				
Internal Fire Fighting     Major Accident				
Major Accident				
Fire Behaviour and Broathing Apparatus				
Fire Behaviour and Breathing Apparatus PHYSIOLOGY	Yes		+	
	100			
WORKING	Yes	Yes	Yes	
In Enclosed/Confined Spaces	30	70		
In Hot & Humid Atmospheres				
<ul> <li>In Smoke</li> </ul>				
	L	1	1	1

-				1	
FIRE BEHAVIOUR		Yes	Yes		
•			60		
•	Fire development and spread within aircraft				
•	<ul> <li>Extinguishment and prevention of fire development</li> </ul>				
EQUIP	EQUIPMENT		Yes	Yes	
Set Description		20	80		
•	Warning Devices				
•	Personal lines				
•	Servicing				
•	Protective clothing				
•	Cylinders				
PROCE	DURES	Yes	Yes	Yes	
•	General Check	30	70		
•	Don and Start Up				
•	Entry Control – Rapid Deployment, Stage 1 & Open Air				
•	Working Durations				
•	BA Wearer responsibilities				
•	Search techniques				
•	Emergency procedures				
BA EXE	BA EXERCISES		Yes		
•	Walk, Run and Climb	10	90		
•	Emergency Procedure				
•	Crawl Way				
•	Heat & Smoke				
•	Confined Space				

# Appendix D

# Structured Learning Programme Framework

## **Firefighter - Revalidation**

## Aim

The aim of the SLP is to refresh the skills and knowledge of firefighters in both the technical and practical skills for the effective deployment to deal with an aircraft incident utilising the 'safe person concept'.

This SLP shall refresh the requirements of the occupational standards in AFF1-12 of CAP 699.

## Attendance Criteria

Candidates should attend this course to revalidate their competence as a firefighter.

## Pre-Study

The following shall be a pre-course requirement:

• Knowledge of CAP 168, Chapters 8 and 9.

## **Technical Content**

- Dynamic risk assessment
- Safe person concept
- Compartment fire behaviour
- Fire fighting tactics and techniques
- Case studies
- Breathing apparatus use and control procedures
- Search techniques
- Practical exercises

#### **Delivery Method**

The technical content shall consist of a review delivered in the classroom, confirmed by practical application of skills and tactics.

#### Assessments

Assessments against the requirements of AFF1-12 shall be carried out and recorded.

#### Length of Course

It is expected the course will be in the region of 28 hours (excluding meal breaks).

## Validity

- 1. Through a local training programme and revalidation at an Approved Training Provider (ATP);
- 2. Maintained through an accepted MOC scheme.

## Appendix E

## Structured Learning Programme Framework

## **Firefighter - Bridging**

## Aim

The aim of the SLP is to provide candidates from other rescue and fire fighting services with the knowledge of civil aviation aircraft fire fighting and rescue skills.

#### Attendance Criteria

Candidates will have been previously trained in a similar rescue and fire fighting role. An assessment of their competence and prior learning shall be carried out to ensure that this condensed course will deliver all the necessary knowledge and skills. If there is any doubt it should be discussed with the Approved Training Provider who may seek the guidance of the Civil Aviation Authority's Aerodrome Standards Department.

## Pre-Study

The following shall be a pre-course requirement:

- Knowledge of CAP 168 Chapters 8 and 9;
- Prior learning in a fire and rescue role/s.

## **Technical Content**

The content will be dependent on the Accredited Prior Learning of the candidates and may cover the following subjects. The focus areas for the SLP should be assessed before or at commencement of the course.

- Dynamic risk assessment
- Safe person concept
- Words of command
- Manual handling
- Compartment fire behaviour
- Civil aircraft construction
- Fuels and fuel tanks
- Fire fighting tactics and techniques
- Organisation of the Incident Ground
- Radio procedures
- Fire safety at airports
- Emergency planning
- Case studies
- Breathing apparatus use and control procedures
- Search techniques
- Practical exercises

#### Delivery Method

The technical content shall consist of a review delivered in the classroom.

The appreciation of dealing with civil aircraft incidents shall be confirmed by practical exercises.

## Assessments

Assessments against the requirements of AFF1-12 shall be carried out and recorded.

## Length of Course

It is expected the course will be in the region of 70 hours (excluding meal breaks).

## Validity

- 1. Through a local training programme and revalidation at an Approved Training Provider (ATP);
- 2. Maintained through an accepted MOC scheme.

## Appendix F

## Structured Learning Programme Framework

#### Crew Commander Incident Command - Initial

## Aim

The aim of the SLP is to allow potential or new incident commanders to develop and apply skills in risk assessment, decision making, planning, objective setting, prioritising and reviewing applicable to a range of realistic scenarios.

This SLP shall be heavily biased to practical application of incident command. It shall deliver the knowledge requirements of the occupational standards in AWM7 of CAP 699.

#### Attendance Criteria

Candidates should attend this course before they operate in an operational command role or as soon as practicable after they take up a command role.

#### Pre-Study

The following shall be a pre-course requirement:

• Knowledge of the principles outlined in the Fire and Rescue Manual - Incident Command.

#### Technical Content

- Organisation of the Incident Ground
- Command Competence
- Risk Assessment Generic and Dynamic
- ICS System
- Spans of control
- Sectorisation
- Responsibilities
- Occupational Standard AWM 7

#### **Delivery Method**

The technical content shall have been studied prior to the course; an assessment of precourse study shall be carried out.

The application of the ICS shall be delivered by a variety of practical team exercises followed by debriefs. The main learning outcomes will be identified by the debriefs.

Candidates should be divided into crews - there should be a number of small scenarios and the crews rotated around the scenarios.

For example:

- 1. An engine fire tackled by one crew and one appliance using hand lines;
- 2. An undercarriage fire tackled using dual application;
- 3. A collision between two vehicles on a taxiway, 1 person trapped;
- 4. A fuel spillage adjacent to a risk.

The focus shall be the practical application of ICS, which shall be confirmed by assessment on a practical training area. Classroom simulation should only be used as a means of transition from understanding to application.

#### Assessments

Continuous assessments against the requirements of AWM7 shall be carried out and recorded.

## Length of Course

It is expected the course will be in the region of 35 hours (excluding meal breaks).

## Validity

- 1. Through a local training programme and revalidation at an Approved Training Provider (ATP);
- 2. Maintained through an accepted MOC scheme.

## Appendix G

## Structured Learning Programme Framework

#### Crew Commander Incident Command - Revalidation

## Aim

The aim of the SLP is to allow incident commanders to refresh and demonstrate skills in risk assessment, decision-making, planning, objective setting, prioritising and reviewing applicable to a range of scenarios.

This SLP shall be biased to practical application of incident command. Various means of simulation may be used e.g. a mix of fireground and virtual simulation. It shall deliver the knowledge requirements of the occupational standards in AWM7 of CAP 699.

#### Pre-Study

The following shall be a pre-course requirement:

• Knowledge of the principles outlined in the Fire and Rescue Manual - Incident Command.

## **Technical Content**

- Organisation of the Incident Ground
- Command Competence
- Risk Assessment Generic and Dynamic
- ICS System
- Spans of control
- Sectorisation
- Responsibilities
- Occupational Standard AWM 7

#### **Delivery Method**

The technical content shall consist of a review delivered in the classroom.

The application of the ICS should be delivered by a variety of practical team exercises or simulation exercises followed by debriefs. The main learning outcomes will be identified by the debriefs.

Candidates should be divided into crews - there should be a number of small scenarios and the crews rotated around the scenarios.

For example:

- 1. An engine fire tackled by one crew and one appliance using hand lines;
- 2. An undercarriage fire tackled using dual application;
- 3. A collision between two vehicles on a taxiway, 1 person trapped;
- 4. A fuel spillage adjacent to a risk.

The focus shall be the practical application of ICS, which shall be confirmed by assessment on a practical training area. Classroom simulation should only be used as a means of transition from understanding to application.

#### Assessments

Continuous assessments against the requirements of AWM7 shall be carried out and recorded. The assessments shall be carried out in a practical training area.

## Length of Course

It is expected the course will be in the region of 35 hours (excluding meal breaks).

## Validity

- 1. Through a local training programme and revalidation at an Approved Training Provider (ATP);
- 2. Maintained through an accepted MOC scheme.

## Appendix H

# Structured Learning Programme Framework

## **RFFS Supervisor - Initial**

## Aim

The aim of the SLP is to equip supervisors with the knowledge, skills and understanding to undertake a RFFS supervisory role at aerodromes.

It shall deliver the knowledge requirements of the occupational standards in AWM1 - 7 of CAP 699.

## Attendance Criteria

A working knowledge of incident command.

## Pre-Study

The following shall be a pre-course requirement:

- Knowledge of the standards AWM1 7;
- Understanding of CAPs 699 and 168.

## Technical content

• CAP 699

•

- CAP 168, Chapters 8 & 9
- Management of operational scenarios e.g. aircraft evacuation, Hazmats, aircraft incidents
- Tactical application of the Incident Command System up to and including silver level
  - Safety management
    - Policies
    - o Procedures
    - Risk assessment Dynamic and Analytical
    - o HR matters
    - o Human factors
    - Emergency/contingency planning
    - Monitor and review (Briefing and Debriefing)
    - Management responsibilities
- Environmental issues
- Post-incident scene management
- Investigation processes management, legal and AAIB

## **Delivery Method**

Methods of delivery could include:

- 1. Syndicate working;
- 2. Facilitated learning;
- 3. Case studies;
- 4. Team exercises;
- 5. Simulation.

The SLP may be split into modules covering management, supervision and incident command. The delivery of the management and supervisory modules can allow distance learning and simulation, however the incident command module should predominantly focus on practical application and assessment in a practical training area.

## Assessments

Assessments against the requirements of AWM1 - 7 shall be carried out and recorded.

## Length of Course

It is expected the course will be in the region of 100 hours (excluding meal breaks).

## Validity

- 1. Through a local training programme and revalidation at an Approved Training Provider (ATP);
- 2. Maintained through an accepted MOC scheme.

# Appendix I

# Structured Learning Programme Framework

## **RFFS Supervisor - Revalidation**

## Aim

The aim of the SLP is to allow candidates to refresh their supervisory and command skills.

It shall refresh the knowledge requirements of the occupational standards in AWM1 - 7 of CAP 699.

## Attendance Criteria

A working knowledge of tactical incident command and supervisory skills.

## **Pre-Study**

The following shall be a pre-course requirement:

- Knowledge of the standards AWM1 7
- CAP 168
- CAP 699
- Incident Command System

## **Technical Content**

- Management of developing operational scenarios at airports utilising the Incident Command System up to and including Silver Command
- Current RFFS issues
- Safety Management Systems
- Post-incident scene management and investigation

## **Delivery Method**

The course should recognise that candidates are competent commanders and supervisors and shall focus on updating technical matters and enhancing command and supervision.

Methods of delivery could include:

- 1. Syndicate working;
- 2. Team exercises;
- 3. Simulation;
- 4. Learning from incidents (Case studies).

The confirmation of command skills should be assessed on a practical training area.

## Assessments

Assessments against the requirements of AWM1 - 7 shall be carried out and recorded.

## Length of Course

It is expected the course will be in the region of 35 hours (excluding meal breaks).

## Validity

- 1. Through a local training programme and revalidation at an Approved Training Provider (ATP);
- 2. Maintained through an accepted MOC scheme.

## Appendix J

## Structured Learning Programme Framework

#### Fire Service Manager

## Aim

This SLP shall take the form of a Continuous Professional Development (CPD) programme to ensure fire service managers are competent in their role and up to date with current technical and managerial issues facing the RFFS.

#### Attendance Criteria

Fire service managers should develop a CPD programme for themselves and any other relevant staff. This will generally be theoretical delivery; however, there may be opportunities for practical application of management skills.

If fire service managers carry out an operational role they should maintain their operational competence as a separate need.

## Content

The content of the CPD for the year will be determined by the managers' appraisal system and the themes for that year set by the Airport Operators Association Rescue and Fire Fighting Working Group.

The means of meeting the CPD plan for that year could be:

- Fire Service Managers seminar;
- Professional organisation conferences, seminars or workshops;
- Training courses;
- Reflective e.g. a particular project such as a vehicle procurement;
- Membership of working groups.

CPD records can include points that are either set by organisations or scored by the manager. Points can cover maintaining core knowledge and skills, acquisition of new knowledge and skills and gaining transferable knowledge or skills.

#### Delivery Method

This SLP is in the form of a CPD plan.

#### Length of Programme

It is expected that 5 hours of meaningful input equates to one point or credit of CPD and the target CPD points or credits for a year should be 12.

Further guidance on Continuous Professional development can be found on the CPD pages of the Chartered Institute of Personnel and Development website - <u>http://www.cipd.co.uk/cpd</u>. The website includes templates that can be downloaded and adapted for use.

#### Validity

The validity of the CPD plan and awarded points should be reviewed as part of the manager's appraisal.