

WEST MIDLANDS FIRE AND RESCUE AUTHORITY

EXECUTIVE COMMITTEE

23RD MAY 2005

1. **PROPOSAL TO BUILD A CARBONACEOUS FIRE BEHAVIOUR TRAINING FACILITY WITH BIRMINGHAM INTERNATIONAL AIRPORT**

Report of the Chief Fire Officer.

RECOMMENDED

- 1.1 THAT approval be given to pursue a partnership with Birmingham International Airport to purchase and operate a Carbonaceous Fire Behaviour Training Facility at Birmingham Airport.

2. **PURPOSE OF REPORT**

This report is submitted to seek the Committee's approval to establish a carbonaceous fire behaviour training facility in partnership with Birmingham International Airport on the airport site. This would enable the advanced training of personnel in fire behaviour, improving their firefighting techniques in respect of enclosed compartment fires such as those experienced in residential property and high rise fires. It would also support the introduction of phase two and phase three positive pressure ventilation (PPV) techniques. Firefighter safety would be enhanced and the effectiveness of the Brigade's operational response would be improved. Furthermore, it would enhance the training facilities available to the Commercial and Industrial training Unit (CITU). These training facilities would be used by CITU to provide fire safety training to public and private sector businesses, reducing risk in the business community and providing an income to support the Authority's risk reduction strategies under its Integrated Risk Management Plan.

3. **BACKGROUND**

- 3.1 Following fatal fires in South Wales and Avon in the 1990's Fire and Rescue Services embarked on a programme of training their personnel in compartment fire entry techniques.

- 3.2 In order to provide training for firefighters in these techniques, the WMFS purchased two LPG based flashover simulators. These simulators provide excellent initial training for personnel in compartment entry techniques but are limited in that they are simulators. Real behaviour patterns of fire cannot be produced in a simulator. This can lead to firefighters becoming over familiar with the fire behaviour created by the simulators and not being sufficiently aware of the variety of higher risks created by real compartment fires. Recent tragedies have shown that although we have reduced the risk to our firefighters there is more that needs to be done.
- 3.3 The Fire Service Manual Volume Four – Fire Service Training ‘Guidance and compliance framework for compartment fire behaviour training’ (CFB Training) contains the best practice for Fire and Rescue Services in carrying out CFB Training. Within that manual there exist specific objectives aimed at firefighters in the different stages of their career from Phase One through to Incident Commander.
- 3.4 There are several aims stated within the Manual which the Brigade cannot fully meet using LPG alone. A demonstrator unit, the (Cheshire Box), goes some way to alleviate this but does not fully create the realism that crews need to get a proper understanding of fire behaviour. By using a CFB training facility, it is possible to create real compartment fires and allow Firefighters to gain a better understanding of the risks created by differing types of compartment fire. This would improve the effectiveness of our firefighting techniques whilst also improving our safety standards.
- 3.5 The WMFS currently operates Phase One - Positive Pressure Ventilation (PPV). This means PPV is only used when the fire is out. A number of Fire and Rescue Services are either looking to move to phase two PPV use (fire under control but not yet extinguished) or are already doing so. Four Brigades are already at phase three (positive pressure fire attack prior to crews entering).
- 3.6 In order to progress with tactical firefighting/positive pressure ventilation, it is necessary to raise the awareness of fire behaviour amongst operational personnel. If this can be achieved, it will raise safety levels amongst crews by allowing them to extinguish fires under more controlled conditions. This would have applications in all building fires and would be of particular benefit in high rise incidents.
- 3.7 The Brigade has recently been approached by Birmingham International Airport (BIA) with a view to entering into a partnership

to jointly purchase a CFB Training Facility at Birmingham Airport. Working in partnership with the Airport has a number of distinct advantages:


3.8.1 Cost of construction would be shared. The ground-works and site would be provided by BIA. The cost of the project would be considerably reduced by linking with the airport in that they already have facilities that will be available to us, specifically:

- Environmental separation units are already in-situ.
- Electricity supplies are provided.
- Water supplies are installed.
- Classroom/debriefing facilities are already provided and are in the process of being upgraded.
- The cost of providing these other facilities has been estimated as being in the region of £210,000.

3.8.2 Running costs and maintenance costs would be shared pro-rata.

3.8.3 Security of the facility is enhanced by the fact that the airport is a secure site.

3.8.4 Permission to build carbonaceous facilities can be difficult to obtain in urban areas due to emission laws. Airport Authorities are subject to different regulations and do not have the same problem with emissions due to their location away from built up areas. Notwithstanding this every effort would be made to minimise any emissions.

3.8.5 This proposal would promote joint working with the Airport Fire Service.  The Brigade would be able to benefit from their expertise in areas such as foam use and fire behaviour.


3.9 The proposal would also provide a further facility for use by the Authority's Commercial and Industrial Training Unit (CITU) and increase the opportunity for income generation through enhanced training for existing clients and through new business. Other Airport Fire Services have expressed an interest in the training that can only be provided by the use of such CFB Training Units. There would also be scope for regional collaboration.

3.10 It would furthermore reduce the pressure on our existing firehouses

and extend their lives accordingly. The firehouses at Training Centre, Coventry and Oldbury have high levels of use and this results in increased wear and tear on these resources. The CBF training Unit would reduce the rate at which these facilities are declining.

- 3.11 The arrangement would be controlled by a suitably drawn up contract.

4. **EQUALITY AND DIVERSITY IMPLICATIONS**

The proposals outlined above would support an improved level of service to all sections of the community. Furthermore, there would be the facility for joint working with other agencies leading to a better understanding of differing organisational roles in protecting the wider community. 

5. **CORPORATE AIMS SUPPORTED**

The principal corporate aims supported by the information in this report are as follows.

- 4. Working in partnership with communities other agencies and the Government
- 6. Caring for the health safety and welfare of all our people
- 10. Ensuring all our people are competent, enabled and achieving their full potential

6. **LEGAL IMPLICATIONS**

The course of action recommended in this report would be the subject of a formal agreement and contract with the Airport Authority.

7. **TRADE UNION CONSULTATION**

The Trade Unions have been consulted in the preparation of this report

8. FINANCIAL IMPLICATIONS

- 8.1 The Authority's estimated proportion of the construction costs of the proposed facility is £70k. BIA would provide the ground-works, domestic facilities, storage, security and grounds maintenance.
- 8.2 The 2005/206 Capital Programme, which was approved at the Authority Meeting on 14th February, identified surplus capital resources of £321k in order to provide funding flexibility. Consequently, the proposed project could be accommodated within this year's Capital Programme.
- 8.3 The life of the unit would be a minimum of 10 years with annual maintenance costs being shared with BIA pro rata. The estimated annual maintenance cost for this Authority would be approximately £2k and would be met from within existing Training Centre budget allocations.

BACKGROUND PAPERS

Fire Service Manual Volume Four – Fire Service Training 'Guidance and compliance framework for compartment fire behaviour training' Brigade Training Centre files.

F. J. E. SHEEHAN
CHIEF FIRE OFFICER