

**OCCUPATIONAL HEALTH SCHEME**

**FOR MEMBERS**

**OF THE**

**RETAINED FIRE SERVICE**

***LOCAL GOVERNMENT MANAGEMENT  
SERVICES BOARD***

July 2005

## INTRODUCTION

The fire service is a front-line emergency service. It is made up of staff, trained, equipped and available to respond to a variety of emergency situations which arise. To ensure that fire-fighters are capable of safely and efficiently undertaking the tasks which they are required to perform, it is necessary put in place arrangements for ensuring that fire-fighters are healthy and fit. This is in the interest of the staff themselves and their colleagues, the authorities who employ them, and the public whom they serve.

As part of the 1999 Composite Agreement management and unions committed to a review of the Occupational Health Scheme for Retained Firefighters introduced in 1998. This review was assisted by Dr. William Jenkinson Medical Advisor to the Northern Ireland Fire Service.

The scope of this document is -

- general arrangements
- medical surveillance
- medical report forms
- premature medical retirement

## **MEDICAL ADVISERS**

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### **Essential Requirements**

Current Medical Advisers should:

- \* *be a fully registered Medical Practitioner with the Medical Council of Ireland.*
- \* *have a least three years experience as a fully registered medical practitioner.*

### **Desirable Attributes**

It is desirable that the Medical adviser should:

- \* *be a member of an academic college.*
- \* *have a post graduate qualification in occupational health.*
- \* *familiarise themselves with the Fire Services and develop a knowledge of the Fire Services*

The Medical Adviser should be aware of the tasks required in accordance with this document on standards for the Occupational Health Service in the Fire Service and the document for recruitment to the Fire Service.

### **Future Appointments**

For any future appointments to the position of medical advisor it is essential that the Medical Adviser should:

- have a Diploma in Occupational Medicine.

## **FREQUENCY OF MEDICAL EXAMINATIONS**

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Full medical examination prior to recruitment and subsequent medical examinations as follows;

From recruitment until the age of 39.	Every 5 years.
From 40 - 49	Every 3 years.
From 50 - 54	Every 2 years
From 54 - 58	Every year

In exceptional circumstances it may be deemed necessary to refer a firefighter to the medical adviser in between routine medical examinations.

## **TIMING OF MEDICAL EXAMINATIONS**

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Local Authorities should seek in so far as is possible to advise each firefighter as early as possible in advance of the date, time and location of the medical examination and no later than a minimum of three weeks in advance of the medical examination. No medical examinations should be scheduled immediately prior to annual leave and the Christmas period.

## **OCCUPATIONAL HEALTH RECORDS**

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Occupational Health Records will be kept by the Medical Advisor and will only be released without the consent of the employee in exceptional circumstances. These are outlined in Guide to Occupational Physicians on Ethics.

## **OCCUPATIONAL HEALTH REPORT**

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The Medical Adviser will send a report to Human Resources advising them of the outcome of the medical. (A standard reporting form is attached at appendix 1). In exceptional circumstances it may be necessary to write a longer report outlining the reasons for the decision.

### **Recommendations following Assessment:**

The following are the types of recommendations to be made by the medical adviser.

- a) Fit to continue in service in current post.
- b) Fit to continue in service at present but should be referred for re-examination in \_\_\_\_\_ weeks.
- c) Temporarily unfit to continue in service at present but should be referred for re-examination in \_\_\_\_\_ weeks.
- d) Permanently unfit to resume work.
- e) Fit to resume work on \_\_\_\_\_

The Medical Adviser may wish after initial assessment to refer the fire fighter to a Specialist, appropriate to the fire fighters medical condition, for further assessment. It is important however, that the decision in relation to the medical condition or otherwise of the fire fighter be made by the Medical Adviser, who because of his/her training in occupational health and knowledge of the Fire Service, is in the best position to make the final assessment.

Any decision or action to be taken as a result of the report of the Medical Adviser shall be made in consultation with the Medical Adviser.

## **TIME FRAME FOR ADVISING OUTCOME OF EXAMINATION**

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The medical adviser will tell the fire-fighter the outcome of the medical examination at the conclusion of the examination. There will be some situations where this is not possible e.g. further information has to be gathered or blood test results obtained. In these situations the doctor should inform the employee as soon as possible after the medical examination and in any event within 7 days of the information becoming available. The Human Resources Department should be made aware of any delay.

Where an employee is seen for routine periodic medical examination and found to be unfit to continue on operational duties he should be told so at the time of the medical. The medical adviser should tell the employee that he/she is not medically fit to continue on operational duties and he/she should not respond to any fire calls or drills. His/her disability may be permanent or temporary. The medical adviser should follow this up with a telephone call to Human Resources Department or the Chief Fire Officer advising that the fire-fighter is not available for fire-fighting duties/drills as soon as possible after the examination.

The Human Resources Department will write to each employee and formally inform them of the result of the medical examination.

## **COST OF SCHEME**

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In so far as costs arise from medical examination and reports required under the scheme these will be met by the local authority.

## **INOCULATIONS**

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### *Tetanus*

A booster is required every 10 years. Enquiries should be made at pre-employment as to the last inoculation and an employee advised to attend their general practitioner if it is not within the last 10 years. Further enquiries can be made at routine periodic medicals.

### *Hepatitis B.*

The decision to commence a programme of Hepatitis B vaccination is based on an assessment of risk from the vaccine compared to the risk of contracting Hepatitis B at an incident. At present there is no effective vaccine for other blood borne infections such as Hepatitis C and HIV.

The cost of inoculations will be borne by the Local Authority.

It will be the responsibility of the medical adviser to maintain a record of inoculations for each firefighter. (Appendix 2)

## **SCOPE OF MEDICAL EXAMINATION**

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It is recommended that on-going health surveillance of fire service personnel should include:

- Measurement of height/weight ratio
- Pulse/blood pressure
- Visual Acuity – the minimum visual acuity of the fire fighter should normally be 6/18. This must in no case fall below 6/24 correctable to 6/9, 6/12 and any decision should be taken after consideration of the fire fighters operational ability and other aspects of visual function.
- Fire fighters may use spectacles of an appropriate specification on the fire ground should they be needed to obtain this standard of vision.

- Fire fighters should have a normal binocular visual field as determined by confrontational techniques.
- Near vision is only likely to become a problem with the hypermetropic entrant when the age of 40 or more has been reached. At this time unaided distance acuity should be as set out above. It is not thought necessary to routinely test near vision. The loss of normal accommodative power in the eye over the age of 40 should not prove a disqualification for operational fire fighting.
- Urinalysis
- Hearing Test
- Pulmonary function testing – forced expiratory volume in one second ( FEV 1.0) and forced vital capacity (FVC)
- Strength testing would not generally be required as part of routine surveillance, but it will be necessary on some occasions, if a fire fighter has been sick for a substantial period, or is encountering problems with certain tasks which require strength.

### **ADVICE ON SPECTACLES SUITABLE FOR USE IN THE FIRE SERVICE**

#### Spectacles suitable for use with Breathing Apparatus

1. BA Facemasks that incorporate spectacle inserts must pass leakage tests as described in EN136 and have obtained appropriate certification.
2. The spectacles should in addition:
  - I. Incorporate lenses made of abrasion resistant (hard) coated polycarbonate to minimise lens misting,
  - II. Be securely mounted in the mask so that they will not be dislodged while in use.
  - III. Have thin frames so as not to restrict visual field and be securely mounted and have provision for adjustment so as not cause discomfort and in addition be removable for servicing for servicing and cleaning.

Spectacles suitable for use on the Fire ground when not wearing Breathing Apparatus.

The spectacles should:

1. Comply with EN166/BS 166
2. Incorporate abrasion resistant coated polycarbonate lenses to minimise misting and provide a significant degree of eye protection,
3. Be robust and provide for side shields if considered appropriate, but they should not restrict visual field,
4. When necessary, incorporate bifocals that cause minimum disturbance to vision and also allow air to circulate between the face and spectacle lenses to minimise misting.

## **SELF REPORTING OF MEDICAL CONDITIONS**

In the event that a Firefighter is diagnosed by his own Doctor as having any of the serious risk medical conditions set out below the Firefighter must notify the employer immediately. The Fire Fighter should complete the form at appendix 3 and forward it to the medical adviser. Based on medical certificate provided by his own Doctor the fire-fighter will then be placed on sick leave and will not return to work until passed fit for duty either through the occupational health test procedure or the independent appeals procedure.

Serious risk medical conditions:

These are medical conditions which require urgent referral to an occupational physician and could lead to an employee being unfit to continue on fire service duty on the grounds of health and safety either temporarily or on a permanent basis. Only common conditions have been listed:

### **Respiratory**

Asthma, bronchitis

### **Cardiac**

Angina, heart attack, myocardial infarction. Abnormal heart rhythm, high blood pressure.

### **Neurological**

Fits seizures epilepsy black out loss of consciousness.  
Head injuries, sleep disorders e.g. sleep apnoea, narcolepsy

### **Musculoskeletal**

Arthritis, painful joint or spine. Fractures and dislocations.



### **Gastrointestinal**

Peptic ulcer, inflammatory bowel disease

### **Mental Health**

Severe anxiety, depression, psychosis, alcohol or drug dependency

### **Special senses**

Impairment of hearing, eyesight, or balance

### **Endocrine**

Diabetes mellitus of any type

## **PREMATURE MEDICAL RETIREMENT**

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### **Role of the Medical Adviser**

The primary purpose of medical assessment of fitness to work is to ensure that the individual is fit to perform the task involved effectively and without risk to his/her own or other's health and safety. If there is reasonable concern about a fire fighter's medical condition and the ability to continue as an operational fire fighter, he/she should be referred to the Medical adviser. If requested by the Medical Adviser, the Fire Authority should provide any information pertinent to the fire fighter's fitness. The Medical Adviser may also request a report from the fire fighter's own Medical Practitioner, detailing the fire fighters medical condition.

The main areas where health advice is needed are, when

1. The patient's condition may limit, reduce or prevent him/her from performing the job effectively, for example muscular skeletal conditions that limit mobility or manipulative ability.
2. The patient's condition might be made worse by the job, for example excessive physical exertion in some cardio-respiratory conditions, or exposure to certain allergies in asthma.
3. The patient's condition is likely to make it unsafe for him/her to do the job, for example liability to sudden unconsciousness in hazardous situations.
4. The patient's condition is likely to make it unsafe, both for him/her and others whether fellow workers and/or the community.

## **APPEALS**

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If a fire-fighter has been found permanently unfit to continue employment they should be advised in the letter informing him/her of the outcome of the medical examination that they have 14 days in which to lodge their appeal. In this period he/she is not medically fit to continue on operational duties and therefore is not available for firefighting duties. Appeals must be made in writing and the employee should state the reason why they believe they have grounds for an appeal.

The appeal system will consist of an independent occupational physician in a suitable geographic location appointed by the local authority. A specialist in Occupational Medicine should conduct the medical examination in the case of the appeal. The decision of the Doctor carrying out the examination under the appeal process is final and binding on both the employee and local authority. The fire-fighter shall not be dismissed during the period of the appeal.

**MEDICAL REPORT**

**NAME:**

**ADDRESS:**

**SEX**

**DATE OF BIRTH** \_\_/\_\_/\_\_

\_\_\_\_\_

MEDICAL EXAMINER'S NAME

ADDRESS

PHONE NUMBER

\_\_\_\_\_

***TO BE ANSWERED BY THE INDIVIDUAL***

PLEASE STATE YOUR HABITS NOW PREVIOUSLY  
IN REGARD TO SMOKING PER DAY:  PER DAY:

PLEASE STATE YOUR HABITS NOW PREVIOUSLY  
IN REGARD TO ALCOHOL UNITS/DAY:  UNITS/DAY:

ARE YOU RECEIVING ANY SPECIAL DIET, PILLS OR TREATMENT FROM ANY DOCTOR, HOSPITAL OR CLINIC OR TAKING ANY OTHER FORM OF DRUGS?

\_\_\_\_\_

A full family history is **only** required at pre-employment examination prior to recruitment. This includes a report from the firefighter's GP.

This should include details of any family history in respect of the following;

- Mental illness
- Respiratory problems such as tuberculosis, asthma and bronchitis
- Cardiovascular conditions such as heart attacks and high blood pressure
- Diabetes
- Epilepsy
- Cancers

**At subsequent examinations it will be sufficient to enquire if there has been any change in the family history previously provided or in the firefighter's own medical condition.**

HAS THERE BEEN A CHANGE IN YOUR MEDICAL CONDITION SINCE YOUR LAST EXAMINATION?

NO  YES  - EXPLAIN :

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

IS THERE STRONG FAMILY HISTORY OF ANY MEDICAL CONDITION?

NO  YES  - EXPLAIN :

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

HAS THERE BEEN A CHANGE IN YOUR FAMILY MEDICAL HISTORY SINCE YOUR LAST EXAMINATION?

NO  YES  - EXPLAIN :

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

HAVE YOU BEEN IMMUNISED AGAINST TETANUS?

NO  YES  - EXPLAIN :

\_\_\_\_\_

WHAT POSTS HAVE YOU HELD PREVIOUSLY?

- 1. \_\_\_\_\_ 2. \_\_\_\_\_
- 3. \_\_\_\_\_ 4. \_\_\_\_\_

HAVE YOU EVER BEEN EXPOSED TO:

- NO  YES -CHEMICALS (KIND)  NO  YES -GAS (KIND)
- NO  YES -DUST (KIND)  NO  YES -NOISY ENVIRONMENT (WHERE)
- NO  YES -METALS  NO  YES -IONISING RADIATION (WHERE)

WHEN DID YOU LAST CONSULT A DOCTOR?

REASON:

HOW WOULD YOU CLASSIFY YOUR HEALTH?

- EXCELLENT  GOOD  POOR

**DECLARATION AND AUTHORISATION (TO BE READ TO THE APPLICANT OR EMPLOYEE BY THE MEDICAL ADVISOR AND SIGNED IN HIS PRESENCE IN ALL CASES)**

**I have not withheld any information or falsified statements regarding my physical or mental condition. I understand that misrepresentation may mean dismissal.**

\_\_\_\_\_  
Witness Date Signature  
**TO BE COMPLETED BY EXAMINING DOCTOR**

IS THE EXAMINEE KNOWN TO YOU PROFESSIONALLY OR OTHERWISE?  
 IF SO, WHAT DO YOU KNOW OF HIS OR HER HEALTH, OR FOR WHAT CONDITIONS HAVE YOU TREATED HIM OR HER?

GENERAL APPEARANCE:

SPEECH:

SKIN:

HEART: MURMURS?

ENLARGED?

CHEST & LUNGS:

AIR ENTRY:

WHEEZE OR FORCED EXPIRATION?

EYES:

FUNDUS  
 VISUAL FIELDS

R  
 R

L  
 L

EARS:

ANY DISCHARGE, OBSTRUCTION OR INFLAMATION?

NOSE:

SEPTUM:

ANY ABNORMALITIES?

TEETH :

CONDITION :  GOOD  FAIR  BAD DENTURES?

MOUTH:

GUMS:

TONGUE:

THROAT:

TONSILS:

PALATE:

PHARYNX:

GLANDS:

CERVICAL:

AUXILIARY:

INGUINAL:

THYROID:

CIRCULATION:

VARICOSE VEINS:

ABDOMEN:

SPLEEN:

LIVER:

SCARS:

HERNIA:

INGUINAL:

FEMORAL:

VENTRAL:

EXTREMETIES:

HANDS:

FEET:

NERVOUS SYSTEM:

REFLEXES:

HEIGHT:

WEIGHT:

CVS:

PULSE AT REST -

IS IT REGULAR?

BLOOD PRESSURE:

SYSTOLIC

DIASTOLIC

EYES:

PUPIL REACTION:

ANY ABNORMALITIES?

ISHIHARA COLOUR PERCEPTION:

DO YOU WEAR GLASSES OR CONTACT LENSES?

YES

NO

VISION (DISTANT) WITHOUT GLASSES	R6/	L6/	WITH GLASSES	R6/	L6/
VISION (NEAR) WITHOUT GLASSES	RN	LN	WITH GLASSES	RN	LN

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**SUMMARY OF AUDIOMETRY:**

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**PULMONARY FUNCTION TESTS:**

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<b>URINE:</b>	ALBUMIN:	SUGAR:	OTHER ABNORMALITY?
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**BLOODS:** (IF INDICATED)

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**STRENGTH AND FITNESS TEST:**

GRIP STRENGTH:	RIGHT	<input type="text"/>	LEFT	<input type="text"/>
	LEG/BACK	<input type="text"/>		
STEP TEST:	WEIGHT	<input type="text"/>	PULSE	<input type="text"/>
	FITNESS SCORE	<input type="text"/>	AGE CORRECTED	<input type="text"/>
			CATEGORY	<input type="text"/>

## PHYSICAL FITNESS TEST

### 1. INTRODUCTION

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This document sets out the detailed procedures for the recommended step test<sup>1</sup> to assess physical fitness and the related tables.

### 2. EQUIPMENT REQUIRED FOR THE TEST

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To carry out the test the following equipment is required:

- i) a sturdy bench or step, 30 cm high
- ii) a stop-watch;
- iii) a metronome or other audible signalling device programmed for 90 beats/minute;
- iv) scales;
- v) room thermometer; and
- vi) a chair.

### 3. TESTING PROCEDURE

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For the test to be a valid indicator of aerobic capacity it should take place in a quiet room at a temperature of 18-20°C. The subject should refrain from participating in any vigorous activity prior to taking the test which should not be administered immediately following the drinking of coffee or tea or smoking. It is advisable for the test to be postponed if the subject is recovering from a debilitating illness.

The metronome should be set to 90 beats/minute then, after removing any heavy clothing, stepping up onto the step and back to the floor should commence following the beat.

- Reference: SHARKEY B.J. (1974) in Physiological fitness and weight control Pub. Mountain Press Publishing Co.

*The stepping sequence should be:*

- |   |  |   |                  |
|---|--|---|------------------|
| - | <i>first foot onto step</i>              | - | <i>1st beat;</i> |
| - | <i>followed by second foot onto step</i> | - | <i>2nd beat;</i> |
| - | <i>first foot returned to floor</i>      | - | <i>3rd beat;</i> |
| - | <i>second foot returned to floor</i>     | - | <i>4th beat.</i> |

The cycle is then repeated for 5 minutes.

At the end of the 5 minute exercise period the subject should be seated in the chair and his/her pulse taken for EXACTLY 15 seconds, starting EXACTLY at 15 seconds and ending at EXACTLY 30 seconds after exercise. The subject should then be weighed wearing the clothing worn during the test.

#### **4. SCORING THE TEST**

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Using Table 1 or 2 below (for men and women respectively); find the subject's pulse rate, i.e. the number of beats recorded multiplied by 4, in the left hand column; the  $VO_2$  (max) can then be read from the table for the nearest corresponding body weight shown in the top row.

The  $VO_2$  (max) value so obtained is then corrected for age by multiplying it by the age factor given in Table 3. This is to allow for the fact that the test relies on the use of the pulse rate to predict aerobic capacity and the maximal pulse rate decreases with age.

For example, a man of 30 years of age, weighing 82 kg (180 lbs) with a post-exercise pulse rate of 140 beats per minute would have an indicated aerobic capacity of 41.6 ml/kg/minute. To obtain the actual value, this is multiplied by the age correction factor of 0.96 resulting in a value of 39.9 ml/kg/minute.

#### **5. CONCLUSION**

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Although the  $VO_2$  (max) should be reproducible from day to day, it is possible for it to decrease temporarily following illness, vigorous exercise etc.



Therefore, to be fair to those candidates falling into this category it would be prudent for the test to be carried out by the medical officer during the initial medical examination. The medical officer should best be able to assess the situation, and, if necessary, recommend a re-test at a later date when recovery is complete.

**Allowance must be made for the natural decrease in aerobic capacity which occurs with age.** Table 4 sets out suitable minimum levels of aerobic capacity for each age group of existing firefighters. Although the  $VO_2$  (max) should be reproducible from day to day, it is possible for it to decrease temporarily following illness, vigorous exercise etc.

Therefore, to be fair to those candidates falling into this category it would be prudent for the test to be carried out by the medical officer during the initial medical examination. The medical officer should best be able to assess the situation, and, if necessary, recommend a re-test at a later date when recovery is complete.

If an individual fails to achieve the minimum level appropriate to the age group, then he/she should be put on a programme to achieve an improved level of aerobic fitness through fitness training and diet. A reasonable period of time (e.g. 6 months) should be allowed before another test is conducted, during which the individual should make a positive effort towards attaining an acceptable level of aerobic fitness and body weight in order to continue to work as a fire fighter.

**TABLE 1.**

**Aerobic Capacity (ml/kg/minute) for a given body weight and post-exercise pulse rate - MEN**

**BODY WEIGHT:**

**	120 55	130 59	140 64	150 68	160 73	170 77	180 82	190 86	200 91	210 95	220 100	230 105	240 lbs 109 kgs
180	33.0	32.8	32.8	32.6	32.6	32.3	32.3	32.3	32.3	32.1	32.1	31.9	31.9
175	34.8	33.9	33.9	33.7	33.4	33.4	33.4	33.0	33.0	33.0	32.8	32.8	32.8
170	35.4	34.8	34.8	34.8	34.3	34.3	34.3	34.3	34.1	34.1	34.1	34.1	34.1
165	36.7	36.7	35.9	35.6	35.6	35.6	35.2	35.2	35.2	35.2	35.0	34.8	34.8
160	37.2	37.2	37.2	37.2	37.0	36.7	36.7	36.7	36.5	36.5	36.5	35.9	35.9
155	38.7	38.5	38.3	38.1	37.8	37.8	37.8	37.8	37.8	37.8	37.6	37.4	37.4
150	40.3	39.8	39.8	39.6	38.9	38.9	38.9	38.9	38.7	38.7	38.7	38.7	38.5
145	41.6	40.9	40.7	40.3	40.3	40.3	40.0	40.0	40.0	40.0	40.0	40.0	40.0
140	42.9	42.7	42.0	41.8	41.8	41.8	41.6	41.6	41.6	41.6	41.6	41.6	41.6
135	44.4	44.0	43.3	43.1	43.1	43.1	43.1	43.1	43.1	42.9	42.9	42.7	42.5
130	46.2	45.8	45.5	45.3	45.1	44.9	44.9	44.9	44.7	44.7	44.7	44.2	44.2
125	48.0	47.3	47.1	46.9	46.6	46.6	46.6	46.6	46.4	46.4	46.4	46.4	46.4
120	49.7	49.3	49.1	48.8	48.6	48.6	48.4	48.4	48.4	48.4	45.4	48.4	48.4
115	51.7	51.7	51.5	51.0	51.0	51.0	51.0	51.0	50.6	50.6	50.6	50.4	49.5
110	53.7	53.7	53.5	53.2	53.2	53.0	52.8	52.8	52.8	52.6	52.6	51.7	51.3
105	56.1	56.1	56.1	55.7	55.4	55.2	55.2	55.0	55.0	55.0	53.9	53.5	53.0
100	59.0	58.7	58.3	58.1	58.1	58.1	57.4	57.4	57.6	56.5	56.1	55.3	--
95	64.2	61.8	61.2	61.2	61.2	60.9	60.7	60.7	59.4	58.7	57.2	--	--
90	67.3	65.1	64.7	64.7	64.5	64.2	64.0	62.5	61.6	60.1	--	--	--
85	69.3	69.3	68.2	67.8	67.8	67.8	65.8	64.9	63.7	--	--	--	--
80	72.8	72.6	71.9	71.9	71.9	69.5	66.4	67.2	--	--	--	--	--

\*\* = POST EXERCISE PULSE RATE (BEATS/MINUTE)

**TABLE 2.**

**Aerobic Capacity (ml/kg/minute) for a given body weight and post-exercise pulse rate - WOMEN**

**BODY WEIGHT:**

**	80 36	90 41	100 45	110 50	120 55	130 59	140 64	150 68	160 73	170 77	180 82	190 lbs 86 kg
175	--	--	--	--	--	--	--	--	--	--	--	31.2
170	--	--	--	31.9	31.9	32.1	32.1	32.1	32.1	32.1	32.1	32.3
165	--	--	--	32.3	32.6	33.0	33.0	33.2	33.2	33.2	33.2	33.2
160	--	--	33.4	33.7	33.9	34.1	34.3	34.3	34.3	34.3	34.3	34.3
155	--	--	34.5	34.8	35.2	35.4	35.4	35.4	35.4	35.4	35.4	35.4
150	--	--	35.6	36.1	36.3	36.3	36.7	36.7	36.7	36.7	36.7	36.7
145	--	37.2	37.4	38.1	38.1	38.1	38.1	38.1	38.3	38.3	38.9	38.9
140	--	38.7	39.4	39.4	39.4	39.6	39.6	39.6	39.6	39.6	39.6	39.6
135	39.6	39.8	40.0	40.3	40.3	40.9	40.9	41.1	41.1	41.4	1.6	41.6
130	40.5	41.1	41.8	42.0	42.2	42.9	42.9	43.1	43.3	43.3	43.6	43.6
125	41.4	43.6	43.8	44.0	44.0	44.4	44.7	44.9	44.9	45.3	45.3	45.3
120	42.5	45.3	45.8	46.0	46.0	46.4	46.9	47.1	47.1	47.3	47.5	47.5
115	44.4	47.7	48.0	48.0	48.0	48.0	49.3	49.3	49.3	49.3	49.3	49.3
110	48.0	50.2	51.5	51.7	51.7	51.7	51.9	52.4	52.4	52.8	--	--
105	51.7	53.7	53.7	53.9	54.1	54.6	55.4	55.7	55.7	--	--	--
100	55.2	56.8	57.0	57.6	58.3	58.3	59.4	--	--	--	--	--
95	58.1	60.7	61.2	61.6	62.3	62.3	--	--	--	--	--	--
90	62.7	64.7	65.6	67.5	67.5	68.6	--	--	--	--	--	--

\*\* = POST EXERCISE PULSE RATE (BEATS/MINUTE)

**TABLE 3.**

**Age Factors for the age range 18 to 58 years**

<i>Age (years)</i>	<i>Factor</i>	<i>Age (years)</i>	<i>Factor</i>
18	1.07	40	0.88
19	1.06	41	0.87
20	1.05	42	0.86
21	1.04	43	0.86
22	1.03	44	0.85
23	1.02	45	0.84
24	1.01	46	0.83
25	1.00	47	0.82
26	0.99	48	0.82
27	0.98	49	0.81
28	0.98	50	0.80
29	0.97	51	0.80
30	0.96	52	0.79
31	0.95	53	0.78
32	0.94	54	0.78
33	0.93	55	0.77
34	0.93	56	0.76
35	0.92	57	0.75
36	0.91	58	0.75
37	0.90		
38	0.89		
39	0.89		

**TABLE 4.*****SUGGESTED MINIMUM VO<sub>2</sub> (MAX) VALUES FOR SERVING FIREFIGHTERS***

<b><i>Nearest Age (Years)</i></b>	<b><i>VO<sub>2</sub> (MAX) (ml/kg/min)</i></b>
<b><i>25</i></b>	<b><i>45</i></b>
<b><i>30</i></b>	<b><i>44</i></b>
<b><i>35</i></b>	<b><i>43</i></b>
<b><i>40</i></b>	<b><i>42</i></b>
<b><i>45</i></b>	<b><i>41</i></b>
<b><i>50</i></b>	<b><i>40</i></b>
<b><i>55</i></b>	<b><i>39</i></b>
<b><i>58</i></b>	<b><i>38</i></b>



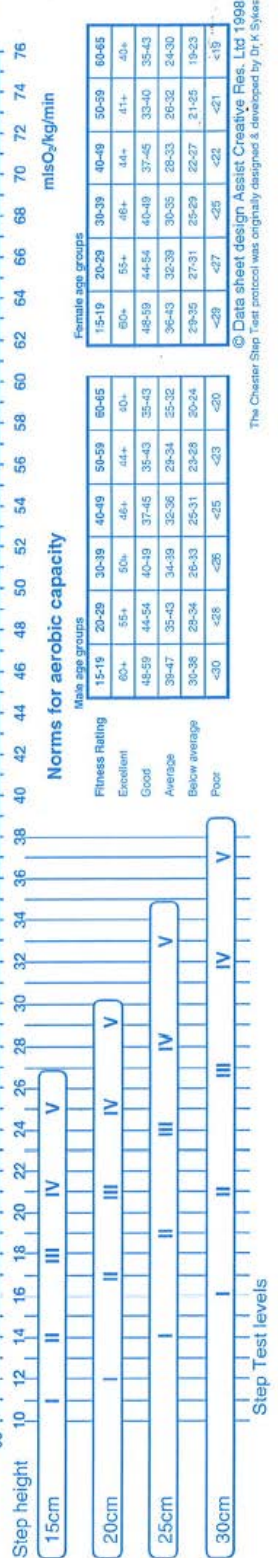
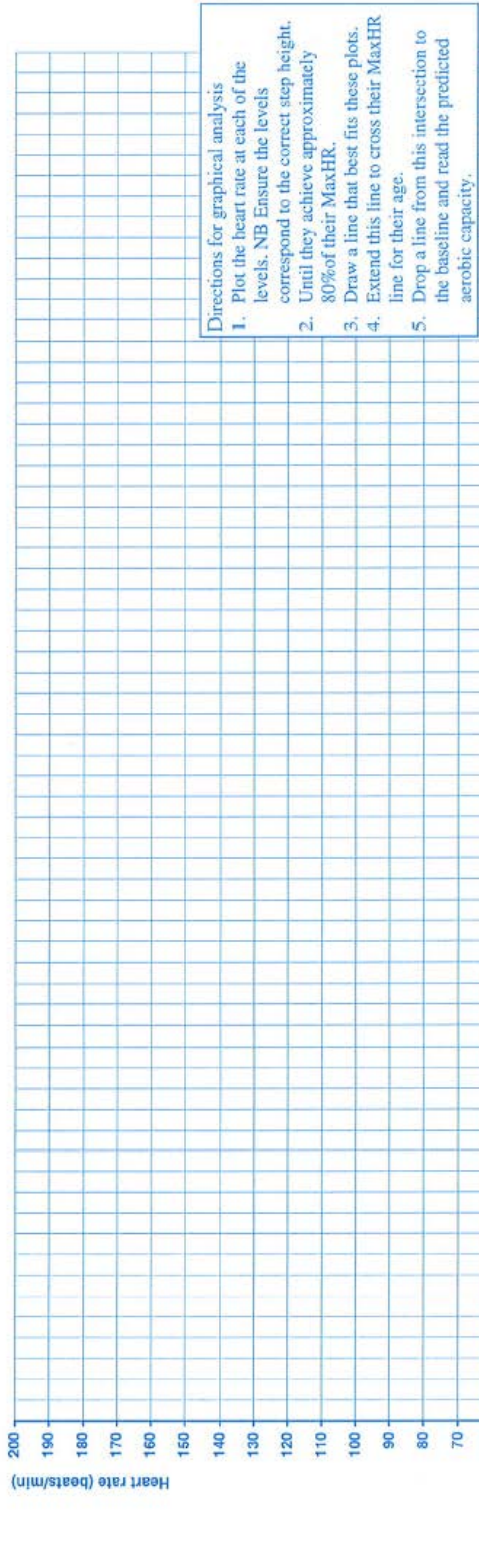
**Chester Step Test data collection and results sheet**

Name ..... Age ..... MaxHR ..... 80%MaxHR ..... b/min .....  
 Tick when checked .....  
 MaxHR = 220 - Age ..... 80%MaxHR = MaxHR x 0.80 .....  
 b/min

Readiness to exercise check .....  
 Contra-indications to exercise .....  
 Lifestyle activity level check ..... Step height for test ..... cm .....  
 Tester's initials .....

Date of test:	
Aerobic capacity: (mlsO <sub>2</sub> /kg/min)	
Fitness rating:	
Remarks:	

Step level	I	II	III	IV	V
Heart rate recorded at each level					
Exertion level from RPE scale					



**Appendix 1**

County Council

RETAINED FIRE SERVICE OCCUPATIONAL HEALTH SCHEME

**FROM:** FIRE SERVICE MEDICAL ADVISER

**TO:** PERSONNEL OFFICER

**RESULT OF MEDICAL EXAMINATION OF SERVING EMPLOYEE  
(FIT OR PRESENTLY UNFIT)**

I examined the under noted employee on

NAME: \_\_\_\_\_

POST/RANK: \_\_\_\_\_

SERVICE NO: \_\_\_\_\_

I have found \* him/her:-

- \*(a) fit to continue in service in current post.
- \*(b) Fit to continue in service at present but should be referred for re-examination in \_\_\_\_\_ weeks.
- \*(c) temporarily unfit to continue in service at present but should be referred for re-examination in \_\_\_\_\_ weeks.
- \*(d) Permanently unfit to resume work.
- \*(e) Fit to resume work on \_\_\_\_\_

**ADDITIONAL COMMENTS:**

\_\_\_\_\_  
\_\_\_\_\_

**SIGNED:** \_\_\_\_\_  
FIRE SERVICE MEDICAL ADVISER

**DATE:** \_\_\_\_\_





## Appendix 3

### SELF REPORTING OF MEDICAL CONDITIONS

If since your last examination with the medical adviser, you have suffered from any of the following medical conditions, please complete the form below and send to the medical adviser.

If you are unsure about any of the medical conditions listed below, please discuss them with your doctor or consult the medical adviser.

Name:

Address:

DOB:

Occupational Details:

Job Title:

Station:

Time out of work:

Diagnosis:

Hospital inpatient: No  Yes  - Date admitted \_\_\_/\_\_\_/\_\_\_

Date discharged \_\_\_/\_\_\_/\_\_\_

Hospital outpatient: No  Yes  - Date(s) of attendance(s)

Name of Hospital :

Name of consultant:

- sudden change in eyesight
- epilepsy
- alcohol or drug dependency
- bronchitis, asthma or other disabling disease of the lungs
- organic disease of the cardiovascular system, including blood pressure
- all types of diabetes mellitus whether insulin dependant or non-insulin dependent vertigo or an illness affecting the sense of balance
- mental instability
- low back symptoms
- significant knee joint injury or disease
- night blindness
- skin disease. specifically allergic contact dermatitis. irritant dermatitis and severe psoriasis
- gastric or duodenal ulcer
- patent perforation of one or both ears, otitis media or gross nasal sepsis or obstruction
- hernia
- varicose veins
- unsatisfactory dental condition or oral sepsis requiring treatment
- albuminuria
- over or underweight - greater or lesser than 15% of predicted body-weight according to standard tables for height and weight
- diminished strength

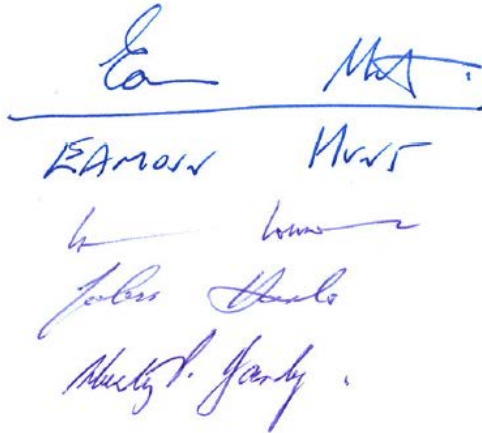
Agreement signed on behalf of:

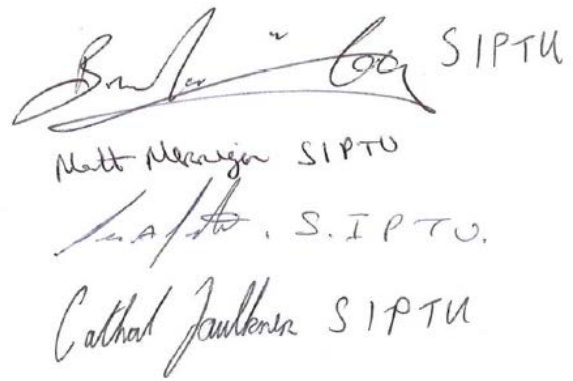
Management:

SIPTU

Eamonn Hunt  
Edmund O Connor  
John Harte  
Murty Hanley

Brendan McCoy  
Matt Merrigan  
Sean Linton  
Cathal Faulkner

  
EAMONN HUNT  
EDMUND O'CONNOR  
JOHN HARTE  
MURTY HANLEY

  
BRENDAN MCCOY SIPTU  
MATT MERRIGAN SIPTU  
SEAN LINTON SIPTU  
CATHAL FAULKNER SIPTU