Ministry of Defence

Air Command Secretariat
Spitfire Block
Headquarters Air Command
Royal Air Force
High Wycombe
Buckinghamshire
HP14 4U

Ref: 2020/09550

[redacted]

23 September 2020

Dear [redacted]

Thank you for your correspondence of the 22 August 2020 requesting the following information:

> *Please provide the latest copy of AP 1269A "Assessment of Medical Fitness". Ideally I would like the entire document, if this is not possible the areas I am looking for relate to medical standards for Aircrew, particularly but not limited to vision standards, which was previously Leaflet 4-02 and 5-14.*
>
> *Please also provide the latest copy of the minimum medical entry standards for direct entrant candidates to the RAF. I understand this was previously contained in AP3391 Vol. 3 Part B, if that is still the case please can a copy be provided, or if not please can the latest information be sourced from elsewhere.*
>
> *Please also provide the latest copy of JSP 950. If the entire document cannot be sent, please send the information in part 6-7-7 section 4, paragraph 4A. This should be the section for "entry standards" - if this has changed, please send the latest information from that document relating to entry standards. The section I am looking for should have a list of conditions affecting the eyes (ophthalmology conditions).*

I am treating your correspondence as a request for information under the Freedom of Information Act 2000 (FOIA).

A search for the information has now been completed, and I can confirm that information in scope of your request is held.

Copies of each of the documents are attached electronically as detailed below;

Annex A Air Publication (AP)1296A Assessment of Medical Fitness Leaflet 4-02
Annex B AP1296A Assessment of Medical Fitness Leaflet 5-14
Annex C AP 3391 Vol 3, Part B

Under Section 21 (Information accessible by other means) JSP 950 has previously been released under Freedom of Information, for your convenience a link to the document is provided below

https://www.whatdotheyknow.com/request/latest_edition_of_jsp_950

In accordance with the Data Protection Act 2018, under Section 40(2) of FOIA (third party personal data), some information contained within the documents is withheld as exempt information.

If you are not satisfied with this response or you wish to complain about any aspect of the handling of your request, then you should contact us in the first instance at the address above. If informal resolution is not possible and you are still dissatisfied then you may apply for an independent internal review by contacting the Information Rights Compliance team, Ground Floor, MOD Main Building, Whitehall, SW1A 2HB (e-mail: cio-foi@mod.uk). Please note that any reason for an internal review must be made within 40 working days of the date on which the attempt to reach informal resolution has come to an end.

If you remain dissatisfied following an internal review, you may take your complaint to the Information Commissioner under the provisions of Section 50 of the Freedom of Information Act. Please note that the Information Commissioner will not normally investigate your case until the MOD internal process has been completed. The Information Commissioner can be contacted at: Information Commissioner's Office, Wycliffe House, Water Lane, Wilmslow, Cheshire, SK9 5AF. Further details of the role and powers of the Information Commissioner can be found on the Commissioners website at https://ico.org.uk/.

Yours sincerely,

Air Command Secretariat

Enc:

Annex A
Annex B
Annex C

LEAFLET 4-02: ROYAL AIR FORCE MEDICAL STANDARDS – AIRCREW

Sponsor: DACOS Av Med

1. Aircrew must possess a high degree of physical and mental stamina to withstand the rigours of flying, especially under active service conditions while aircraft controllers require high levels of concentration and vigilance, careful medical examination and assessment, both pre-selection and during routine review, is therefore essential. This leaflet details the fitness standards required of aircrew and aircraft controllers. Policy and guidance relating to specific medical conditions is detailed in Section 5 which should be read in conjunction with this leaflet.

ASSESSMENT AT ENTRY

2. All aircrew and controllers will have an initial medical board at the Recruiting and Selection Department of Occupational Medicine (R&SDOM) unless they qualify for a waiver of the initial medical board (para 6). The usual minimum JMES for entry for aircrew is A-1/A-2 L-2 M-4 E-2; the selection standards for regular RAF aircrew and controllers, commissioned and non-commissioned, are detailed in AP3391 Branch Selection Sheets and Trade Selection Sheets[1]. For ground trades selected in-service for airborne mission crew the medical standards are in AP3392 Vol 2 Lflt 1570 para 15d. The medical standards for other ground trades employed in the air are in AP1269A Lflt 4-04[2]. The usual minimum JMES for entry for regular controllers is A-4 L-2 M-1 E-2, the selection standards for regular aircraft controllers are detailed in AP3391 Branch Selection Sheets and Trade Selection Sheets.

3. The Board is to award a JMES to regular Service personnel and to those who hold a reserve forces appointment, other personnel are to awarded a minimum of an A grade, with any limitations to be noted on the certificate of fitness. The Board is to record its findings in the electronic medical record. Where there are no clear instructions for the distribution of documents the minimum documentation is an FMed 566, certifying fitness or otherwise flying duties and listing limitations, distributed to:

a. The Flying Executive of the unit where the individual will be employed.

b. The employer; i.e. the relevant MoD Service or civilian personnel branch, or the contractor.

c. The individual.

Non-Regular Aircrew[3]

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[1] This is the minimum tri-Service entry standard for aircrew training. Single Service refractive error limits may be more exacting and are detailed at Annexes A and B.

[2] Air Despatcher:AP12691 Lflt 4-04 Annex B
ABM(ASOP) (TG12): AP1269A Lflt 4-04 Annex L
Aeromed (TG15):AP1269A Lflt 4-04 Annex O
Cabin Crew (TG19): AP1269A Lflt 4-04 Annex S

[3] This group will include PTVR, AEF, FTRS, Sponsored Reserves, FMOs, Civil Servants, Civilian Contractors

4. Those aircrew are to attend an initial medical board at R&SDOM to establish their fitness for their proposed flying duties unless they qualify for a waiver (para 6). The minimum acceptable medical standard is one leading to the award of a JMES of A-3 L-2 M-4 E-2. The standards to be used are those for serving aircrew. The individual must be fit for the full operational flight envelope of the aircraft type in which flying duties will be performed and, except as indicated below, for solo flight. The following specific requirements and apply:

a. **Non-regular aircrew** are required to meet the A-2 hearing standards and visual standards at Annex B. In addition, they must meet the standard that would lead to the award of a JMES of A-3 L-2 M-4 E-2 so long as the A-3 limitation does not impact on the execution of their duties. If they are to be employed in two pilot operated aircraft, they may be permitted the limitation "Unfit solo pilot – must fly with the pilot suitably qualified' (MedLim 2000). If compatible with their proposed employment they may also be permitted limitations 'Unfit ejection seat aircraft' (MedLim 2007) and 'Unfit specific aircraft (types to be specified in Med Docs)' (MedLim 2002). Ot limitations are not permitted.

b. **Aviation officers and contractors' pilots** are required to meet the A-2 hearing standards and the visual standards at Annex B.

c. **FMOs** must meet the A-2 hearing standard and the visual standards at Annex A. Any FMO found fit for flying training but not meeting the A-2 or CP2 Visual standard, is to be awarded an A-3 with the limitation 'Fit flight medical officer flying duties only' (MedLim 2003).

d. **Sponsored Reserve Aircrew** will hold a valid EASA (or equivalent as approved by R&S DOM) Class 1 medical certificate as a condition of their employment. This may be used to waive the requirement of their initial or annual entry medical examination, depending on the source of recruitment:

(1) No previous military aircraft service or over 1 year since last PME. These aircrew will be required to undergo an initial medical examination by the authorised medical contractor to assess the fitness of general military service and deployed duties. The results of the completed medical examination will be forwarded to R&S DOM together with a copy of their EASA (or equivalent as approved by R&S DOM) Class 1 medical certificate and their F1047A attestation form of confirmation of their fitness for service and award of their JMES.

(2) Less than one year since their last Service PME. These aircrew will not require an initial medical examination to assess their fitness for general Service and deployed duties. The employer will forward to R&S DOM a copy of their EASA (or equivalent as approved by R&S DOM) Class 1 medical certificate, a completed consent form to access their Service medical records and F1047A attestation form. R&S DOM will award a JMES accordingly.

(3) Currently serving personnel looking for employment as a sponsored reserve. These aircrew will have a current aircrew JMES in addition to an EASA Class 1 medical certificate. A copy of the EASA (or equivalent as

approved by R&SDOM) Class 1 medical certificate, a completed consent form to access their Service medical records and F1047A attestation form will be forwarded to R&S DOM with confirmation of their JMES.

5. Subsequent annual assessment of fitness to operate will be iaw paras 12-16 and a waiver of annual examination service PME may be awarded iaw paras 17-18. In accordance with para 51, where the SP is reaching the age of 60 they will be required to comply with additional tests such as cardiac screening.

6. **Waiver of initial aircrew and controller medical board – non-regular aircrew.** The initial medical board may not be waived for a candidate who will be liable to undertake flying in an aircraft fitted with an ejection seat. The initial medical board or examination for other candidates may be waived, subject to the approval of the R&S DOM Medical Board, in which case the candidate must provide a completed Statement of Health (SOH) (Annex C) and Medical Attendant's Report (MAR) (Annex D); in addition one of the following must apply:

a. The candidate is serving or has served, is qualified for the intended appointment and whose most recent JMES was confirmed by a Service medical examination no more than 24 months before the date of the selection board and meets the standard for employment. The service medical documents must be available to the R&S DOM Medical Board; a full medical examination (level 4) at unit level will be required where the previous examination was completed more than 12 months before the start of the flying appointment.

b. The candidate was passed fit by a Service Permanent Medical Board no more than 24 months before the date of the selection board. The Service medical documents must be available to the R&SDOM Medical Board; a full medical examination (Level 4) at unit level will be required where their previous examination was completed more than 12 months before the start of the flying appointment.

c. The candidate holds a current EASA (or equivalent as approved by R&S DOM) aircrew licence supported by a Class 1 medical certificate, has provided a copy of the audiogram and visual acuities from their most recent EASA (or equivalent as approved by R&S DOM) Class 1 medical examination, has normal results for the initial aircrew and age 40 blood tests (Paras 62-64) as appropriate and has had confirmation of anthropometric fitness by either cockpit checks or formal anthropometry. The blood tests may be performed by any service MO or civilian GP, any costs are to be borne by the employing organisation and not the medical budget, and the results forwarded to R&S DOM. The waiver is valid until the end of the month one year after the date of issue of the EASA (or equivalent as approved by R&S DOM) medical certificates even if the medical certificate needs to be renewed every six months to the type of civilian flying being conducted.

7. Where an EASA (or equivalent as approved by R&S DOM) Class 1 medical certificate is used to provide the basis for a waiver the candidate must present the medical certificate to the Service executive authority responsible for their recruitment with a completed SOH and MAR sealed in an envelope. That authority is to forward a certified copy of the medical certificate with the completed SOH and MAR, unopened, to R&S DOM Medical Board. When the R&S DOM Medical Board is satisfied a waiver can be granted,

the Service executive authority responsible for recruitment is to be informed accordingly. The notification is to include the award of a JMES and a statement of any applicable limitations.

8. The waiver of the initial medical board will remain provisional until the individual's anthropometric fitness for the intended aircraft type and normal blood test results have been confirmed.

9. **Waiver of initial aircrew and controller medical board - Non-regular controllers.** The initial medical board or examination may be waived, subject to the approval of the R&S DOM Medical Board, in which case the candidate must provide a completed SOH (Lflt 4-02 Annex C) and MAR (Lflt 4-02 Annex D). In addition, one of the following must apply:

a. The candidate is serving or has served, is qualified for the intended appointment and whose most recent JMES was confirmed by a Service medical examination no more than 24 months before the date of the selection board and meets the standard for employment. The Service medical documents must be available to the R&S DOM Medical Board; a full medical examination (level 4) at unit level will be required where the previous examination was completed more than 12 months before the start of the aircraft controlling appointment.

b. The candidate was passed fit by a Service Permanent Medical Board no more than 24 months before the date of the selection board. The Service medical documents must be available to the R&S DOM Medical Board; a full medical examination (level 4) at unit level will be required where the previous examination was completed more than 12 months before the start of the aircraft controlling appointment.

c. The candidate holds a current EASA (or equivalent as approved by R&S DOM) ATCO licence supported by a Class 3 medical certificate and has provided a copy of the audiogram and visual acuities from their most recent EASA (or equivalent as approved by R&S DOM) Class 3 medical examination.

10. Where an EASA (or equivalent as approved by R&S DOM) Class 3 medical certificate is used to provide the basis for a waiver the candidate must present the medical certificate to the Service executive authority responsible for their recruitment with a completed SOH and MAR sealed in an envelope. That authority is to forward a certified copy of the medical certificate with the completed SOH and MAR, unopened, to R&S DOM Medical Board. When the R&S DOM Medical Board is satisfied a waiver can be granted, the Service executive authority responsible for recruitment is to be informed accordingly. The notification is to include the award of a JMES and a statement of any applicable limitations.

11. A summary of the documentation required for medical waivers is at Lflt 4-02 Annex E.

~~ANNUAL MEDICAL ASSESSMENTS~~

12. All aircrew and controllers will have their medical fitness assessed annually. Periodic Medical Examinations (PMEs) for aircrew and controllers become due by the anniversary of the previous PME. In order to maintain currency of medical fitness for flying or aircraft control duties, the PME must be completed no later than the last day of the month in which the examination is due[4].

13. For aircrew and controllers in non-flying/controlling appointments the PME and associated ECGs and blood tests can be deferred. If the return to controlling or flying is within 24 months of the last PME the PME can be renewed locally by a MAME; if more than 24 months but less than 5 years have elapsed the PME can be undertaken locally by a FMO. In both cases the MAME/FMO (or tri-service equivalent) must have access to the full medical records, ECGs and blood testing in accordance with the schedules at paras 49 and 62. If more than 5 years have elapsed they must be referred to R&S DOM for a full medical board. If Cat 1 or Cat 2 flying is to be undertaken after the PME has expired a medical iaw Lflt 3-03 Annex C is to be undertaken.

14. Where the PME falls due in a period of deployment or detachment to a location where full medical services and the electronic medical record are not available, the MO responsible for the provision of medical care at the individual's normal duty location is to carry out the PME prior to departure.

15. It is the responsibility of the individual to maintain the currency of their JMES, and for aircrew the flying authoriser is to ensure that they are fit to perform their flying duties. Every aircrew annual medical examination is to be recorded in the Aircrew Logbook in accordance with Paras 40-42.

16. **Non-regular aircrew and controllers.** Some aircrew and controllers employed by MOD are not registered within the military medical system for provision of primary care. This includes, but is not limited to, various types of reserve aircrew, Civil Servants, civilian contractors and VGS instructors who are employed either to fly or control MOD owned/leased aircraft. Some may be employed by civilian companies and, therefore, may have a civilian aviation medical examiner (AME). These personnel need to be assessed for fitness to fly, or control, aircraft on behalf of MOD and should have a military electronic medical record. They are to bring to their medical a MAR, completed by their GP no earlier than 2 months prior to their PME, and an SOH.

17. The CFMO may nominate a military medical centre, usually at or nearby their airfield, where their annual fitness assessment to operate will be assessed by a MAME. On occasion, especially for some Defence Contractor Flying Organizations, the CFMO may appoint a civilian AME as a MAME for this purpose iaw MAA RA 2351(1).

WAIVERS OF ANNUAL AIRCREW AND CONTROLLER MEDICALS

18. **Aircrew**. Annual medical examinations may not be waived for aircrew flying ejection seat aircraft. Non-regular aircrew under the age of 60 may be granted a waiver of the

[4] RAF and Army only. RN aircrew are to have their PME completed by the anniversary of their previous PME

annual PME subject to the following conditions:

a. The individual must hold a current aircrew licence supported by an EASA (or equivalent as approved by R&SDOM) Class 1 medical certificate or equivalent as accepted by R&S DOM.

b. Provide a completed SOH and MAR and a copy of the audiogram and visual acuities from their most recent EASA (or equivalent as approved by R&S DOM) Class 1 medical examination.

c. Undergo satisfactory blood testing as for regular aircrew (Paras 61-63).

d. There must be no new medical limitation on the EASA (or equivalent as approved by R&S DOM) medical certificate.

e. Aircrew aged 60 and over are required to undergo additional screening tests including enhanced cardiac screening (Paras 50-56); their annual waiver is subject to R&S DOM Medical Board approval.

19. The waiver is valid until the date of expiry of the EASA (or equivalent as approved by R&S DOM) medical certificate unless the medical certificate needs to be renewed every 6 months for the type of civilian flying being conducted in this case the waiver will be valid for one year from the date of issue of the medical certificate. Aircrew who fly with a helmet are required to have it checked annually by a MAME.

20. **Controllers**. Controllers aged 60 and over are required to undergo additional screening tests including enhanced cardiac screening (Paras 50-56); their annual waiver is subject to R&SDOM Medical Board approval.Non-regular controllers under the age of 60 may be granted a waiver of the annual PME subject to the following conditions:

a. The individual must hold a current ATCO licence supported by an EASA (or equivalent as approved by R&S DOM) Class 3 medical certificate.

b. Provide a completed SOH and MAR and a copy of the audiogram and visual acuities from their most recent EASA (or equivalent as approved by R&S DOM) Class 3 medical examination.

c. There must be no new medical limitation on the EASA (or equivalent as approved by R&S DOM) licence or medical certificate.

21. The waiver is valid until the date of expiry of the EASA (or equivalent as approved by R&S DOM) medical certificate unless the medical certificate needs to be renewed every 6 months for the type of civilian controlling being conducted in this case the waiver will be valid for one year from the date of issue of the medical certificate.

22. A summary of the documentation required for medical waivers is at Lflt 4-02 Annex E.

REMOTELY PILOTED AIR SYSTEMS (RPAS)[5]

23. The terms RPAS and Unmanned Aircraft System (UAS) are often used interchangeably though the preferred term for larger UAS operated by aircrew is RPAS. RPAS operators may be recruited either from currently serving personnel of any branch who meet the entry criteria or from direct entrants. Serving aircrew, air traffic controllers and aerospace battle managers with an unrestricted JMES are fit to act as RPAS operators following approval by R&S DOM. The following paragraphs outline additional considerations for aircrew with a restricted medical category and for ground based personnel who may be selected to operate RPAS. Contractors flying RPAS on behalf of the MOD must hold an equivalent civilian medical certificate approved by the appropriate sS MO responsible for medical assessment of aircrew on entry.

24. Fitness standards for RPAS operators depend on the NATO classification of the UAS being operated (Annex G) and recognise different risks in each RPAS category. The standards seek to minimise the potential for human operator failure through incapacitation or reduced performance. As the NATO classification is primarily weight based, it may be necessary to adjust medical standards to address specific hazards: conversely, with increasing automation some relaxation of standards may be possible in light of a risk assessment based on the individual's role. All RAF direct entrant candidates will be required to meet the minimum medical entry standard published in AP 3391 Vol. 3 part B branch selection sheet to ensure that they are adequately fit to complete phase 1 and phase 2 training; additional specialist assessment will also be required at R&S DOM. In-service branch transfers may be assessed against the minimum air traffic requirement for fitness for solo controlling and so may be accepted with a lower JMES however RPAS operators will normally be expected to be fit to deploy to austere environments. Although a Class 3 RPAS operator is a ground based role initial training involves a course of elementary flying training (EFT); all applicants requiring this course will need to meet the minimum medical standard for EFT flying.

25. **Class 1 operators** will normally be selected from ground based trades/branches. They must meet standards for military retention and deployment as defined by their specific Service and trade/branch. Additionally, there should be no coexisting medical condition, or treatment, that may result in sudden incapacitation or impaired alertness, judgement, cognition, sensory function or coordination. Distant VA should be correctable to 6/9 (R), 6/12 (L). There are generally no restrictions on near VA or colour vision, though limitations may be appropriate for specific systems if the operator is required to interact with a visual display. A Level 3 medical should be undertaken prior to employment, after which routine medical reassessment is only required at intervals in line with single Service regulations for the individual's original branch/trade. The medical may only be undertaken by a MO or CMP qualified as a Military Aviation Medicine Examiner (MAME).

26. **Military Class 2 operators** require a Level 4 medical prior to selection and are subject to an annual Level 4 PME. Medicals must be performed by a MAME. Individuals

[5] https://modgovuk.sharepoint.com/sites/defnet/dsa/Documents/MAA/Regulation/MRP/1000/RA1600_Issue_7.pdf

should have distant VA correctable to 6/6 and have normal intermediate and near VA as per Annex A. Individuals with H2H2 hearing must have loss no greater than 75 dB(A) summed at 1, 2 and 3 kHz in the best ear (nonstandard low tone summation). For Army candidates medical standards and administrative requirements are set out in Appendix 13 of the PULHEEMS Administrative Pamphlet (PAP). As a rule, medical conditions (and medication use) that would restrict employment of an air traffic controller would also restrict employment of a Class 2 RPAS operator. Operation by civilian contractors presents a very low third-party risk to life (mitigations include multiple people in the control loop, delineated airspace, and small vehicle size). In consultation with the relevant sS CA AvMed or CFMO (RAF), an EASA (or equivalent as approved by R&SDOM) Class 2 medical license may be acceptable as evidence of medical fitness.

27. **Class 3 operators - RPAS(P) and Sensor Operators (SO)** will normally be aircrew but may include non-aircrew personnel in future who will require an initial medical board at R&S DOM. These operators require annual PMEs by a MAME, exactly as they would if piloting manned aircraft, with ECGs and blood testing performed at the frequency specified in paras 45 -66. RPAS operators must meet the visual standards published in Annex A. Normal aircrew hearing standards apply. As a rule, medical conditions (and medication use) that would restrict employment of an air traffic controller would also restrict employment of a Class 3 RPAS operator (RPAS Cdr/pilot).

28. Although Class 3 RPAS operators are considered to be aircrew in that they have command and control over an aircraft they are not exposed to the same physiological stresses as other aircrew and will not have undertaken a full course of aviation medicine training. They will therefore be awarded an A-3 medical standard with the limitation: 'Fit RPAS and EFT flying duties only' (MedLim 2003) those requiring visual correction will be awarded 'Must wear approved visual correction when flying or controlling aircraft (MedLim 2201). An annual assessment of visual correction is required.

GLIDING

29. Air Cadet gliding instructors undergoing training are required to comply with the British Gliding Association (BGA) regulations to hold an NPPL / LAPL (DVLA Gp 1 standard) and not knowingly have a medical issue that would preclude them from achieving a Service gliding instructor medical standard on completion of the course. Once the student has achieved the standard to pass the course he/she is to be medically examined by a Service MO at the parent medical centre of the gliding school at which the student will fly, before being authorised to fly in the instructional role with passengers or other students. The minimum acceptable medical standard is one that could lead to the award of a JMES of A-3 L-2 M-4 E-3. However, any limitations applied must not restrict fitness for solo flight nor fitness for unrestricted flight to a cabin altitude of 10,000 ft. The medical standards to be applied are those for serving aircrew except that the vision standards differ as detailed at Lflt 4-02 Annex B. There is no requirement for chest radiography or an EEG except on clinical grounds.

30. The examining MO is to undertake the examination with a MAR and SOH and record the initial examination on an FMed 144; future annual medicals are recorded on an FMed 143 or equivalent electronic template. The FMed 144 is to be forwarded to R&S DOM Medical Board with an ECG reported through the ECGMS, the MAR and SOH for confirmation of fitness before the candidate commences instructional duties. Reserve

forces gliding instructors are required to hold a full JMES; other candidates are to be certified as either fit or unfit for gliding instructor duties and awarded, initially by R&S DOM, an A3 grade with the MedLim 2003 'Fit gliding instructor flying duties only'. The R&S DOM Medical Board is to confirm fitness and any limitations on employability to, HQ 2FTS and the candidate; the candidate will be issued a sticker for their log book to document their fitness and any limitations. Full-time RAFR and AVO gliding instructors are to have their initial gliding medical at R&SDOM where an A-3 'Unfit all aircraft types except gliders and tug aircraft' (MedLim 2002) JMES will be awarded.

31. A summary of the documentation required for aircrew medical waivers is at Lflt 4-02 Annex E.

EMPMEDICAL EXAMINATIONS FOR AIR GROUND STEWARDS AND PERSONNEL LOYED IN AEROMEDICAL EVACUATION DUTIES

32. Air Ground Stewards (AGS) form part of the constituted crew of the aircraft and are responsible for passenger safety during flight. Therefore, their JMES is to be assessed in relation to the PULHHEEMS standard detailed at Lflt 4-04 Annex S.

33. **Medical examination of AGS.** The minimum acceptable JMES for AGS duties is A-3 L-2 M-4 E-2 MFD with the MedLim "2003- Fit air steward flying duties only". This employment group meets the MAA definition of supernumerary aircrew (RA2340). The medical examinations required for fitness to commence and to continue flying duties for AGS personnel are detailed at Lflt 3-02 Annex A. Direct Entrant Cabin Crew (AGS) recruits will have their fitness for aircrew duties confirmed and their JMES awarded by R&SDOM following their Service entry medical. Those legacy air stewards who are currently serving in a flying role but are graded A4 may be regraded locally to A3 at the time of their next medical review on completion of the appropriate DMiCP template, neither an FMed 23 or Career Management Medical Casework approval is required. AGS personnel are not to suffer from any condition which could result in an increased risk of:

a. Loss of consciousness.

b. Sudden disorientation.

c. Loss of mental or emotional control.

d. Incapacitation if exposed to smoke, fumes, dusts or pollen

e. Examining MOs should also consider the effect of extremes of stature and of obesity on the ability of the individual to perform the intended duties. If there is doubt as to the individual's fitness, advice is to be sought from CFMO (RAF).

34. Aeromed personnel employed on aeromedical evacuation duties are responsible for the medical management and safety of their patients during flight, but are not responsible for the safety of other passengers. This employment group meets the MAA definition of supernumerary aircrew (RA2340). Therefore, their JMES is to be assessed in relation to the PULHHEEMS standard detailed at Lflt 4-04 Annex O for the following personnel :

a. Qualified aeromedical evacuation personnel who are continuously employed on flying duties.

b. Critical Care Air Support Team (CCAST) and Physician Assisted Strategic Aeromed (PASA) personnel who are held at readiness to be employed in flying duties.

35. **Medical examination of aeromed personnel.** The minimum acceptable JMES for aeromed personnel is A-3 MLD, with the MedLiim "2003- Fit aeromed flying duties only". The medical examinations required for fitness to commence and to continue flying duties for aeromed personnel are detailed at Lflt 3-02 Annex A. Those aeromed personnel who are currently serving in a flying role but are graded A4 may be regraded locally to A3 at the time of their next medical review on completion of the appropriate DMiCP template, neither an FMed 23 or Career Management Medical Casework approval is required. Those personnel graded A3 who no longer have a supernumerary aircrew commitment are to be regraded to A4 locally on completion of the appropriate DMiCP template, again, neither an FMed 23 or Career Management Medical Casework approval is required. Aeromed personnel are not to suffer from any condition which could result in an increased risk of:

a. Loss of consciousness.

b. Sudden disorientation.

c. Loss of mental or emotional control.

d. ncapacitation if exposed to smoke, fumes, dusts or pollens.

e. Examining MOs should also consider the effect of extremes of stature and of obesity on the ability of the individual to perform the intended duties. If there is doubt as to the individual's fitness, advice is to be sought from CFMO (RAF).

36. A MO who considers that an individual is permanently unfit to continue in flying duties is to alter the JMES where appropriate. Advice on fitness for work is available from the ROMD; advice on fitness in the aviation environment can also be sought from CFMO (RAF).

MEMBERS OF UNIVERSITY AIR SQUADRONS

37. There are 3 groups of University Air Squadron member:

a. Bursars – will have their initial medical performed by the authorised medical contractor followed by a specialist medical at R&S DOM, they will be required to meet the minimum medical standard for their intended branch, they will be awarded a JMES with an A-3 grade with the limitation 'Fit UAS flying duties only' (MedLim 2003). There is no requirement for an annual PME but they will have the medical repeated by R&S DOM prior to acceptance onto IOT when they will be regraded to A-1 or A-2. Other ground bursars will have their initial medical performed by the authorised medical contractor, they will be required to meet the minimum medical standard for their intended branch, they will be awarded a JMES with an A-3 grade

with the limitation 'Fit UAS flying duties only (MedLim 2003). There is no requirement for an annual PME to maintain their A-3 while a bursar but they will be regraded to A-4 and the MedLim 2003 will be rescinded prior to the commencement of IOT.

b. Members – have no commitment to join the RAF as regulars but are attested as reservists for the duration of their membership of the UAS and so are required to meet the minimum medical standard for reserve service. Their entry medical will be performed by the authorised medical contractor to a standard equivalent to that required for the Personnel Branch, this standard exceeds that required for the Light Aircraft Pilot's Licence and will ensure a level of medical fitness sufficient for UAS non-flying activities. Should they wish to commission they will be required to undergo the full recruit entry medical process.

c. Medical Cadets – See Lflt 4-01 para 7.

38. Candidates for cadetships and bursaries are assessed to the same standard required for candidates for regular service in the appropriate air or ground branch; the minimum PULHHEEMS profile and JMES required for acceptance is detailed in the Branch Selection Sheets and the in AP 3391.

39. **Flying Helmets.** The fit of all aircrew helmets and masks (where applicable) is to be checked by a MAME annually at the time of the PME for all aircrew in a flying appointment or those who fly on a regular basis while in a non-flying appointment. Where unsatisfactory the aircrew logbook is not to be signed until satisfactory adjustment has been made.

40. **Dental Fitness.** Regular aircrew may not be considered medically fit if they are dentally unfit. If the FMed 143 is used, the Dental Officer will indicate the current NATO DF Cat on the form. If the FMed 143 is no longer printed off, the MO/Dental Officer is to enable a robust system to ensure accurate data capture (Aircrew DF Cat) is available for the annual aircrew medical examination, pending the availability of this data via DMICP. NATO DF Cat 1 and 2 are considered compatible with full flying duties. Aircrew with NATO DF Cat 3 should be discussed with the Dental Officer to determine fitness for flying duties. Aircrew with NATO DF Cat 4 are unfit until they have been dentally inspected and a current NATO DF Cat assigned. Further information is at AP1269 Lflt 5-05, Annex I.

41. **Logbooks**. The following information is to be recorded in the aircrew (including Gliding Instructors) or controller logbook following each annual medical examination or waiver and whenever permanent flying limitations are introduced by a medical board:

a. The medical category and any permanent flying limitations.

(1) Only limitations related to flying are required in log books.

(2) Limitations are to be entered in red ink on the first occasion that they are introduced, revised or found to be absent; the limitations must be written in full, with both the numerical code and the text explanation code.

(3) Subsequently, only the JMES and numeric code needs to be recorded in black ink.

(4) To cancel or remove an existing limitation, the revised JMES and any ongoing limitation(s) are to be entered in red ink.

b. The place of examination

c. The date by which the next examination is due.

d. The signature, name, rank and role of the MO.

42. If the logbook cannot be signed by the examining MO, due to outstanding results or checks, the individual is to be issued with a FMed 566 to indicate to the executive the individual's fitness to fly; any limitations, temporary or permanent, should also be recorded on the FMed 566 with both numerical codes and text. Temporary JMESs are to be recorded in the log book and any limitations are to be written with both numerical codes and text. If the logbook cannot be made available to the examining MO then the sticker at Annex F can be issued in lieu.

43. Policing of this policy falls to the flying executive and is not a medical responsibility. In the event of aircrew or controllers failing to provide their logbook, the MO is to remind them of the requirement laid down in this AP, no further action is required by medical staff.

44. **Parachute training** all aircrew flying in aircraft with a parachute must undertake 2 yearly synthetic parachute training iaw MAA RA 2130(3). MAMEs are to ensure that the individual's fitness to undertake this training is also documented on the day.

SPECIAL INVESTIGATIONS

45. **Visual Acuity**. Visual acuity is to be tested using an appropriately illuminated standard Snellen Chart viewed at 6m or using a reverse Snellen Chart viewed in an optical quality mirror at an overall distance of 6m. In all cases the visual acuity is to be tested by a suitably trained health care worker.

46. Good vision is essential for aviation. Although normal vision is defined the ability to discern one minute of 1° of arc, measured at 6m as 6/6[6], the best achievable resolution may be up to 6/3. Visual acuity (VA) better than 6/6 promotes flight safety, and confers an operational advantage; therefore, all aircrew with uncorrected VA of 6/6 are to be referred for routine refraction every other year. Those who are able to achieve better VA with correction are to be offered CFS (Lflt 5-14 Annex B). If they elect to use contact lenses, they should be referred in the usual manner. As this is a voluntary provision for aircrew who are able to achieve the minimum VA uncorrected, an A-2 marker is not required. However, if they are subsequently unable to achieve 6/6 uncorrected, the appropriate A-2 marker must be awarded.

47. Should the VA of aircrew awarded an A2 at their initial aircrew medical improve to 6/6 uncorrected in each eye then they may be upgraded to A1 at an informal medical board

[6] 6/6 means that a figure designed to be seen at 6 m can be read at 6 m. 6/3 means a figure designed to be read at 3m can be read at 6m.

Lflt 2-03 para 14c.

48. **Colour vision**. Testing of all aircrew and controllers at entry is to comprise an initial screen by Ishihara plates at the fitness for service medical followed by CAD testing at R&SDOM, an acceptable CAD score for both aircrew and controller is CV0 or CV1:

CV Category	CAD Unit Threshold	CP Equivalent
CV0	Normal trichomats with RG threshold <= the meanf or	CP2
CV1	Normaltrichomatswith RGthreshold<=theupperorm al limit for age	CP2
CV2	RG threshold <= 2.35 CAD Units but not CV1	CP1
CV3	RG threshold <=4.00 CAD Units but not CV2	CP3
CV4	RG threshold <=12.00 CAD Units but not CV3	CP4
CV5	RG threshold >12.00 CAD Units but not CV4	CP4

Further detail can be found at AP 1269A Lflt 5-14 Annex A

49. **Lung Function Testing**. All aircrew are required to undergo lung function testing during their initial medical at R&SDOM and if clinically indicated at PMEs. The FEV_1 should be between 80-120%, the FEV_1/FVC 75-80% and the PEFR>= 80% of the calculated normal for age, sex and height.

50. **Electrocardiography (ECG)**. The personnel identified below are to have a routine 12-lead ECG examination (including S3R inspiratory), at the intervals specified below:

a. All aircrew (including regular, reserves, Class 3 RPAS operators, civil servants, contractors and FMOs with A-3 or higher), Ops Spt (ATC & ABM), and WOs and SNCOs of TGs 9 and 12 employed on ATC/FC duties:

(1). On appointment.
(2). At ages 25 and 30

(3). Age 30-39: 2-yearly.

(4). Age 40-49: Annually.

(5). Age 50+: Every 6 months whilst appointable to flying or aircraft control duties.

b. Air Traffic Control Assistants (ATCA) recruits require a routine 12-lead ECG examination (including S3R inspiratory); following successful completion of selection procedures (see Lflt 4-04 Annex I).

c. When ATCA personnel are selected for conversion to ATC.

d. Air Cadet Gliding Instructors (including RAF VR and civilian gliding instructors):

(1). On appointment.

(2). Age 40-49: 2-yearly.

(3). Age 50+: Annually.

e. Waivers for the requirement for routine ECGs may be granted to gliding instructors holding a valid Class 1 CAA medical certificate.

50. **Enhanced cardiac screening.** All aircrew and controllers from age 60 require a stress (exercise) ECG on alternate years and those aged 65 or over require an annual stress ECG to identify those with an increased risk of sudden cardiac incapacitation. Target personnel should be referred for testing in advance of their annual PME to ensure that results are available at the time of the medical. There is no need to ground or downgrade aircrew or limit controllers pending results of the investigation, which should be completed in any case within one month of the PME. This policy includes aircrew and controllers operating under a EASA medical waiver; this is an additional requirement over and above CAA regulations.

51. Regular and FTRS Aircrew and controllers are to be referred to the Aviation Medicine Consult Service (AMCS) clinic, RAF Henlow. Other members of the reserve air forces (e.g. AEF and VGS) are also eligible for referral to AMCS; however, it is acceptable to source the investigation locally when necessary (funded as at para 55). For contractors[7], AMCS will accept referrals for Stress testing, without charge only if resources permit.

52. A satisfactory result entails achieving a minimum of Bruce protocol stage 4 or equivalent. Stress ECGs carried out by non-service sources are acceptable if reported as normal by a consultant cardiologist. Reports from technicians are not acceptable.

53. Those unable to achieve a satisfactory result or experiencing problems during testing should be referred to either the AMCS clinic or a Service consultant physician with aviation medicine training. Pending investigation, aircrew should be awarded a TJMES of A-3 'Unfit solo pilot – must fly with a pilot suitably qualified on type' (MedLim 2000) or 'Unfit solo (aircrew category will be specified in Med Docs' (MedLim 2001); controllers should be awarded a TJMES of L-4 'Fit to control only when another controller is on duty and in close proximity' (MedLim 2101). If the investigation is performed elsewhere and reported as abnormal the individual is to be grounded / unfit controlling until reviewed by AMCS; the final JMES will be determined by the outcome of this referral.

54. Funding for stress tests done external to AMCS is to be met by the medical budget for those entitled to full medical care (PHC, secondary care and occupational medicine). For all others, the cost is to be met by the individual's employing organisation, not the medical budget. It is recommended that funding lines be established with the employing organisation before referring for investigation.

55. In order to ensure correct administration and documentation of this process, the following Read codes are to be used.

[7] Aircrew not employed directly by MOD, but operating aircraft belonging to or on behalf of MOD.

a. Referral for exercise ECG – '8HRA' which should be added to the individual's diary for a date 2 months before the exercise ECG is required. It is also to be used when making the referral.

b. Exercise ECG normal – '32130' to be used to record normal results.

c. Exercise ECG abnormal – '32131' to be used to record abnormal results.

57. Regulatory Article 2135(3) prevents pilots from undertaking single pilot operations once they attain 65 years of age. Those aircrew who continue to fly beyond age 65 are only permitted to fly dual where the other pilot is under age 65 and does not carry the A-3 limitation 'unfit solo pilot – must fly with a pilot suitably qualified on type' (MedLim 2000). This restriction is a regulatory one not medical; therefore, aircrew over the age of 65 do not require an A-3 limitation to their JMES. Enhanced cardiovascular screening should continue beyond age 65 for all aircrew who continue to fly.

58. **Auto reporting of screening ECGs.** Screening ECGs that are auto-reported as normal are considered acceptable without awaiting specialist confirmation. Screening ECGs that are reported as "otherwise normal" or "borderline" *may* be acceptable subject to satisfactory clinical assessment of the aircrew member and the following:

a. Marked sinus bradycardia; accept only if rate > 40 bpm

b. Minimal or moderate voltage criteria for LVH, may be normal variant; accept only if: physically fit; no hypertension; no murmur.

c. Rightward axis; accept only if no murmur

d. Sinus tachycardia; accept only if rate < 110 bpm

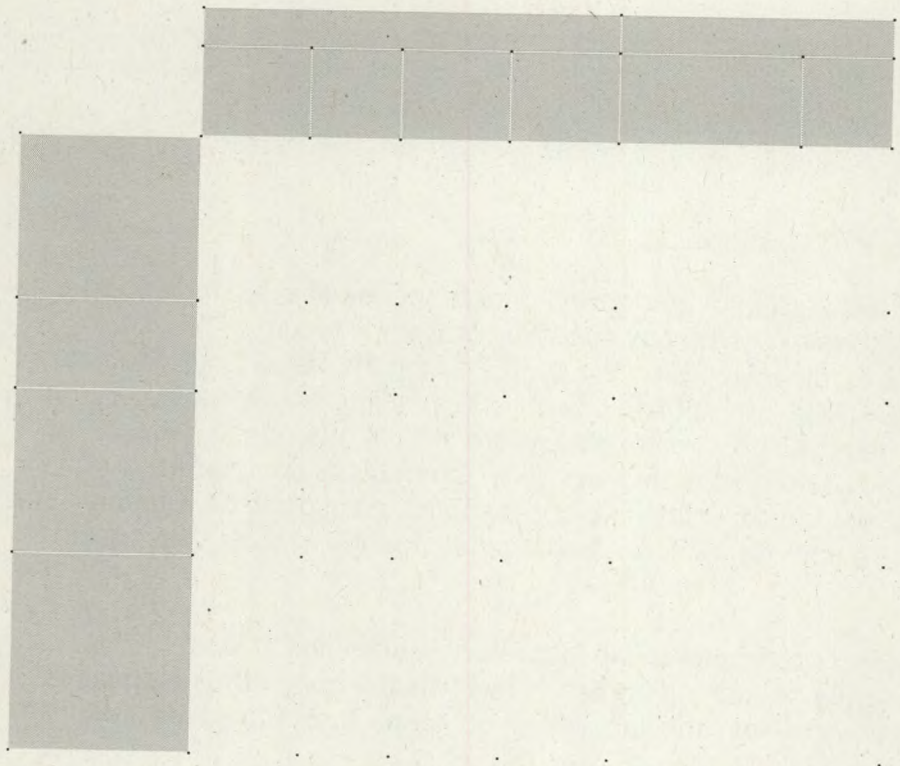
e. No abnormalities noted on examining the rhythm strip.

59. In assessing "otherwise normal" or "borderline" screening ECGs, it is helpful to compare the ECG with previous ECGs if available. If fitness is in doubt, the aircrew member should be grounded pending discussion with a Service physician and/or referral if indicated.

60. All screening ECGs, including those reported as "normal" are still to be submitted for specialist reporting. This is to permit appropriate and accurate audit of all screening ECGs. Policy for the administration of occupational ECGs is at Lflt 3-01 Annex D.

61. **Electroencephalography (EEG)**. There is no requirement for individuals to undergo an EEG unless clinically indicated.

62. **Routine Blood Testing**. All personnel listed at para 49a, with the exception of Ops Spt (ATC & ABM), WOs and SNCOs of TGs 9 and 12 employed on ATC/FC duties and ATCA recruits are to have selection blood tests (verbal consent must be given) as detailed below: Blood samples are for screening purposes and therefore do not require a period of fasting. However, depending upon the results, further investigation may be required. If there is documentary evidence in the candidate's previous Service medical records of



normal results for the tests below which were taken at the correct age or stage of recruitment these tests need not be repeated.

HbA-1c Result (mmol / mol (%))	Action
48 (6.5%) or higher	Probable diabetes: requires formal diagnosis
42-47 (6.0 - 6.4%)	Increased risk: requires further investigation by Primary Health Care
42 (6.0% or less)	Low risk: formal testing only if indicated
Selection Blood Test (non-fasting)	
Haemoglobin Total cholesterol and HDL[8] HbA-1c	

In addition, all personnel listed at para 49a are to have routine blood screening at age 40 (verbal consent must be given) as detailed below:

Blood Test at Age 40 (non-fasting)
Total cholesterol and HDL HbA-1c Thyroid Stimulating Hormone (TSH)

63. Wherever possible, tests are to be performed prior to the medical examination so that results are available at the time of the physical examination. A record of the test is to be recorded in the patient's medical record on the DMICP using the Read Code 'Routine aircrew blood tests' – 'TRIQQRO8'. The periodicity of tests specified is the mandatory minimum acceptable. Where a MO believes that there are clinical grounds to perform additional tests, they may be performed more frequently. Operational contingencies or exchange service may prevent the collection of blood samples in accordance with the schedule. MOs are to ensure that missed tests are completed at the earliest subsequent opportunity.

64. Timeliness in delivering specimens to the laboratory is essential. If local arrangements prevent specimens reaching the laboratory within 4 hours, the responsible MO is to obtain specific advice from the laboratory on steps that should be taken to ensure the validity of test results.

65. **Audiometry.** Aircrew and controllers found for the first time to have a hearing standard lower than H1 are to have audiometry repeated following resolution of any short-term conditions that may influence the result. As a minimum, this should include at least 48 hours free from significant noise exposure. If the hearing remains outside the H1

[8] Note non-fasting bloods are not suitable for measurement of triglycerides

standard they are to be managed as below:

a. **Occupational review**. In addition to being managed iaw JSP 950 Vol 6 Ch 4 Leaflet 6-4-2: Assessing Audiograms - Guidance for Medical Staff (v1.1 Sep 15), when the hearing standard in either ear has fallen from H1 to H2, individuals should be assessed by a MAME to assess if hazardous noise exposure could be responsible. Advice is available from Service Occupational Medicine if required. Referral to ENT should be made if there is a clinical concern.

b. **Functional hearing assessments.** Individuals whose hearing in either ear falls to H3, are to be managed in line with Annex H. For aircrew, a functional hearing check should be supervised by a QFI in flight (aircrew in flying appointments) and for controllers, by a Local Examining Officer (LEO). If satisfactory, MAMEs may award aircrew A-2 with MedLim 2200 (Aircrew assessed as hearing standard <H2 but with a satisfactory functional hearing test iaw AP1269A) at an informal medical board on the authority of an FMO. For controllers, they should be awarded an L-2 with MedLim 2200.

c. **Failed functional hearing assessment**. Arrange review by either ENT or by the Defence Audiological Services. MAME may award aircrew a temporary JMES A-3 L-4, MedLim 2000 (Unfit Solo Pilot - Must fly with a pilot suitably qualified on type) or MedLim 2001 (Unfit Solo (aircrew category will be specified in Med Docs)) in addition to MedLim 7003 (Unfit exposure to noise above (to be specified) level). For controllers, a temporary JMES A-4 L-4 MedLim 2100 (Unfit aircraft controlling duties) and MedLim 7003 (Unfit exposure to noise above (to be specified) level) should be awarded. Where the deficit cannot be corrected, SP are to be referred to RAF MB for award of a PMES. In cases of doubt, advice may be sought from an ROMD.

d. **Periodicity of Functional Hearing Assessment**. The functional hearing check is valid for a maximum of 3 years. It should be repeated prior to the respective PME so that evidence is available to the MAME. A further assessment should be repeated immediately on assignment, change of aircraft type, helmet model or in-ear hearing protection (if used). MAMEs should request immediate reassessment if the audiogram has deteriorated from their last audiogram or if the individual (or colleagues/Executive) report concerns about their ability to hear clearly or operate in the working environment.

e. In parallel to the above occupational management, MOs should continue to clinically manage any potentially significant hearing change (such as rapid hearing loss or unilateral hearing loss).

66. **DNA Typing**. DNA typing provides a useful addition to other methods of identification in fatal aircraft accidents; see JSP 950 Lflt 10-4-1 for further details.

THE MANAGEMENT OF AIRCREW AND OTHERS FOLLOWING AN AIRCRAFT ACCIDENT OR INCIDENT

67. See Annex I

FITNESS FOR SHORT TERM AIR SUPPLY SYSTEM (STASS) WET DRILL TRAINING

68. See Annex J

MEDICAL REQUIREMENTS – HYPOXIA TRAINING AND POSITIVE PRESSURE BREATHING

69. See Annex K

LOSS OF CONSCIOUSNESS (G-LOC) IN AIRCREW

70. See Annex L

MEDICAL REQUIREMENTS – HIGH G TRAINING (HUMAN CENTRIFUGE)

71. See Annex M

LEAFLET 4-02 ANNEX A: VISUAL STANDARDS AT SELECTION - REGULAR AIRCREW AND CONTROLLERS

	Visual Acuity (each eye separately)				Ref. Range		Muscle Balance (Maddox Rod/ Maddox Wing)	Converg	Accommodation[1] (with correction)	CP	Stereopsis (TNO Test)
	Uncorr	Corr.[2]	Inter[3]	Near[4]	Sph	Cyl					
Pilot	6/12	6/6	N14	N5	-0.75 to +1.75 dioptres	0.75 dioptres	Dist: Eso 6Δ to Exo 8Δ, ≤1ΔVertical Near: Eso 6Δ to Exo 16Δ, ≤1ΔVertical	≤10 cm	Age 17 – 20: ≤ 11 cm Age 21 – 25: 11 – 13 cm	2	120 secs of arc
WSO	6/24	6/6	-	N5	-2.00 to +3.00 dioptres	1.25 dioptres	As Pilot	< 10 cm	As Pilot	2	-
WSOp [All except WSOp(L)]	6/24[5]	6/6	-	N5	-2.00 to + 3.00 dioptres Equivalence[6]		Estimated Spherical As Pilot	< 10 cm	As Pilot	2	120 secs of arc

[1] For candidates whose age is above 25, accommodation should fall within normal age parameters.
[2] If the examiner considers the candidate requires CFS he is to be assessed A2 and awarded the appropriate restriction (see Lflts 2-03 and 5-14, Annex C).

[3] Each eye separately at 100 cm with spectacles if applicable
[4] Each eye separately at the appropriate distance for age between 30-50 cm, with spectacles if applicable
[5] To be employed on SAR, the WSOp's eyesight must be correctable to the required standard using contact lenses

[6] The spherical equivalent is the **algebraic sum of the spherical component of refraction plus half of the cylindrical component** of the refraction. For example:Spherical +4.00D with cylindrical +2.00D = (+4) + (2/2) = ESE 5.00Spherical -7.00D with cylindrical +3.00D = (-7) + (3/2) = ESE -5.50

WSOp(L)	6/60[7]	6/6	-	N5	No standard	Trade/Branch entry standards	< 10 cm	As Pilot	4	No Standard
Mission Crew	6/36	6/6	-	N5	No standard	Trade/Branch entry standards	< 10 cm	As Pilot	2	No Standard
Airborne Technician	6/36	6/9	-	N5	Trade entry standards				2	No Standard
Cabin Crew	6/36	6/9	-	-	Trade entry standards				2/3[8]	No Standard
UAS/RPAS Operator Cat 1	Ca >6/60	6/9 R t 6/12 L	-	-	Trade entry standards				4	No Standard
UAS/RPAS Operator Cat 2	>6/60	6/6	-	N5	Trade entry standards				2/3[8]	No Standard
UAS/RPAS Operator Cat 3	>6/60	6/6	-	N5	-6.00 to + 6.00 dioptres	As Pilot	< 10 cm	As Pilot	2	No Standard
Aircraft Controllers (Air Ops (Control)[9]	>6/60	6/6	-	N5	Service entry standard 2.00 dioptres	As Pilot	< 10 cm	As Pilot	2	No Standard

[redacted]

[7] WSOp(L) candidates requiring visual correction should be encouraged to wear contact lenses where clinically appropriate
[8] CP3 for legacy candidates assessed prior to the obsolescence of the Holmes Wright Lantern
[9] Bernchmarked against CAA ATCO standards where appropriate to the military task

LEAFLET 4-02 ANNEX B: VISUAL STANDARDS AT SELECTION - NON-REGULAR AIRCREW

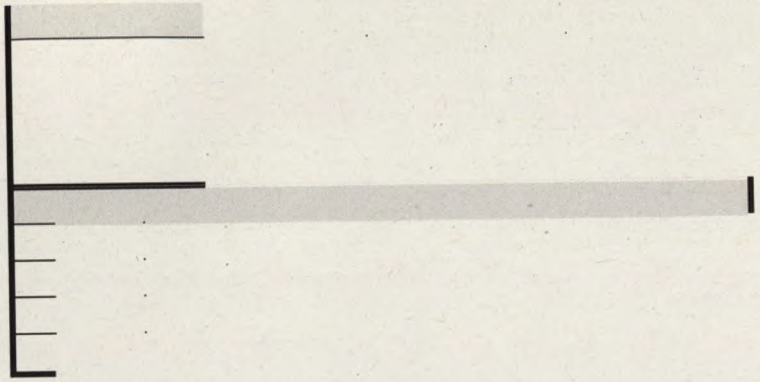
	Visual Acuity (min)				Ref. Range		Muscle Balance (Maddox Rod/ Maddox wing)	Converg.	Accommodation[1] (with correction)	CP	Stereopsis (TNO Test)
	Uncorr.	Corr	Inter[2]	Near[3]	Estimated Spherical Equivalent[4]	Cyl					
PTVR Pilots	6/36	6/6	N14	N5	No standard		Dist: Eso 6Δ to Exo 8Δ, ≤1ΔVertical Near: Eso 6Δ to Exo 16Δ, ≤1ΔVertical	< 10 cm	Age17-20:≤11cmAge2 cm	-25: 11-2	131 20 secs of arc
Sponsored Reserve Pilots	CAA Class 1 visual standards										
PTVR WSO	6/36	6/6	-	N5	No standard		Dist: Eso 6Δ to Exo 8Δ, ≤1ΔVertical Near: Eso 6Δ to Exo 16Δ, ≤1ΔVertical	< 10 cm	Age17-20:≤11cmAge2 cm	-25: 11-2	13 No Standard
Non-Regular Aircrew: Civil Servant Pilots	6/36	6/6	-	N5	No standard		Dist: Eso 6Δ to Exo 8Δ, ≤1Δ Vertical Near:Eso6ΔtoExo16Δ,≤1Δ Vertical	< 10 cm	Age17-20:≤11cmAge2 cm	-25: 11-2	131 20 secs of arc

[1] For candidates whose age is above 25, accommodation should fall within normal age parameters.
[22] Each eye separately at 100 cm, with spectacles if applicable.
[3] Each eye separately between 30-50 cm with spectacles if applicable,

[4] The spherical equivalent is the **algebraic sum of the spherical component of refraction plus half of the cylindrical component** of the refraction. For example:
Spherical +4.00D with cylindrical +2.00D = (+4) + (2/2) = ESE 5.00
Spherical -7.00D with cylindrical +3.00D = (-7) + (3/2) = ESE -5.50

Contractor Pilots AEF Staff Pilots										
Reserve Rearcrew Contracto r Rearcrew	6/36	6/6	-	N5	-2.00 to +3.00 dioptres	Dist: Eso 6Δ to Exo 8Δ, ≤1Δ Vertical Near: Eso 6Δ to Exo 16Δ, ≤1Δ	< 10 cm	As Pilot	2	120 secs of arc
	Or EASA Class 2 visual standards for contractors flying on a waiver									
Gliding Instructors	6/36	6/6	-	N5	No standard	No diplopia	< 10 cm	Age appropriate	4	No Standard
Flight Medical Officer	6/36	6/6	-	N5	No Standard	No diplopia	-	Age appropriate	4	No Standard
Non-regular Aircraft Controllers[5]	>6/60	6/6	-	N5	-6.00 to +6.00 dioptres	2.00 dioptres	< 10 cm	As Pilot	2	No Standard
UAS – (Aircrew Bursars)	As for Regular Aircrew (Lflt 4-02 Annex A)									
UAS – (Student Members)	As entry standard for Pers(Spt)									

[5] Bernchmarked against CAA ATCO standards where appropriate to the military task



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LEAFLET 4-02 ANNEX C: STATEMENT OF HEALTH BY AIRCREW / CONTROLLERS NOT UNDER ROUTINE SERVICE MEDICAL CARE

1. Subject Details:

<table>
<tr><td>Surname:</td><td>Forenames:</td><td colspan="4">Service/Civilian No (if applicable):</td></tr>
<tr><td>Rank/Grade</td><td>Date of Birth:</td><td colspan="4">Sex: Male / Female</td></tr>
<tr><td rowspan="2">Permanent Address:

Country:

Telephone No:</td><td rowspan="2">Postal Address (if different):

Country:

Telephone No:</td><td colspan="4">Service / Contractor:</td></tr>
<tr><td colspan="4">Last Medical Examination:

Date:

Place:</td></tr>
<tr><td>Current A/C Type:</td><td>Crew position:</td><td colspan="4">Flight time hours since last medical:</td></tr>
<tr><td rowspan="3">Alcohol – state average weekly intake:</td><td colspan="2">Do you smoke tobacco?</td><td>Yes</td><td>No</td><td>Never</td></tr>
<tr><td colspan="5">If yes state type and amount:</td></tr>
<tr><td colspan="5">If stopped state date:</td></tr>
<tr><td colspan="4">Do you currently use any medication, either prescribed by your GP or br[illegible]r the ve</td><td></td><td>No</td></tr>
<tr><td colspan="6">If yes please state drug, dose, date started and why:</td></tr>
</table>

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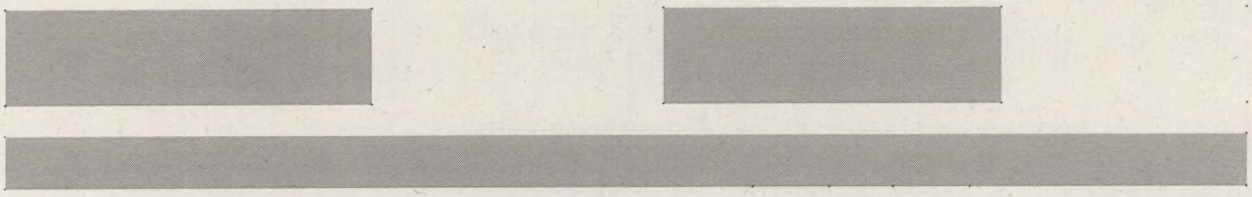
Yes

2. General and Medical History in the past 12 months:

If you have had any of the following in the last 12 months please tick **YES** or **NO** as indicated after each question. **Elaborate on YES answers in the remarks section.**

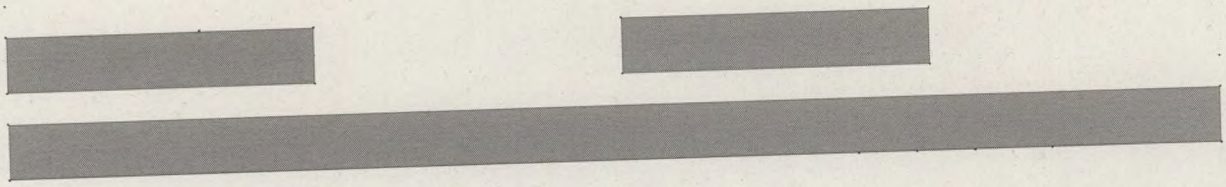
MEDICAL HISTORY	Yes	No	MEDICAL HISTORY	Yes	No	MEDICAL HISTORY	Yes	No	MEDICAL HISTORY	Yes	No
Eye trouble or operations			Spectacle s lenses	and o	r conta	cSpectacles/ contact lens change since PME	last		Kidney stone or blood in urine		
Nose, throat or speech disorder			Hay fever or other allergy			Deafness or ear disorder			Motion sickness requiring medication		
Head injury or concussion			Frequent or severe headache s			Unconsciou sness for any reason			Dizziness or fainting spells		
Neurological: stroke, epilepsy, seizure, paralysis			A positive HIV test			Sexually transmitted disease			Stomach, liver or intestinal trouble		
Anaemia, sickle cell trait or other blood disorders			Diabetes, hormone disorder			High or low blood pressure			Heart or vascular trouble		
Asthma or othe disease	r lung		Malaria or other tropical disease			Psychologi cal or psychiatric tr sort	ouble o	f any	Attempted suicide		
Alcohol, drug or substance abuse			Any other il injury	ness o	r	Visit to medical practitioner since last examinatio n			Admissionto hospital		
Refusal of flying licence			Refusal of life insurance			Award of pension					



						or compensation for injury or illness					
FEMALES ONLY:			Gynaecological or menstrual problems						Are you pregnant?		
FAMILIY HISTORY:			Heart Disease Tu sis			Diabetes			High blood pressure		
High cholesterol Level			Inherited disorders			Asthma			Allergy, eczema		
Epilepsy			Glaucoma			Mental illness					

Surname:	Forenames:	Service/Civilian No (if applicable):

3. Remarks: (if there has been no change to a previously reported condition, please state so)



4. Declaration:

•Iherebydeclarethat Ihavecarefullyconsideredthestatementsmadeaboveandthattothebestofmy knowled
correct. nd

• I have not withheld any relevant information or made any misleading statement

(False, incomplete or misleading statements may result in withdrawal of flying privileges)

•Igivemyconsentforanymedicalpractitionerwhohasattendedmetoreleaseinformationconcern
authorities. ing my hea
medical

•Iamawarethat Iamresponsibleforreportinganynewmedicalconditionthatcouldaffectmyfitnes
2135(2). to fly in ac

Date	Signature of Applicant

LEAFLET 4-02 ANNEX D: AIRCREW / CONTROLLER MEDICAL ATTENDANT'S REPORT

Surname:	**Forenames:**	**Date of Birth:**
Address:		**Service No (if current/ previous):**
Applicant's Unit:		
I consent to the release of this medical report and extract of my medical records to theMODmedicalauthorities.Ido/donotwishtoseethereportbeforeitissent.(Deleteas applicable) Signed Date		

INFORMATION FOR MEDICAL PRACTITIONER

Your patient is currently engaged in a flying or an aircraft controlling role with the MOD as a member of the Reserves, Royal Auxiliary Air Force, as a civilian (including via a contractor) or as a volunteer. The MOD has a responsibility to ensure that he/she is fully fit for this role, but is only able to provide Occupational Health related care, including routine medicals, to ensure continued fitness for service. This means that any treatment received from non Service sources may not be notified, even where it may affect fitness for duty.

This Medical Attendant's Report (MAR), with questionnaire overleaf, is for Service medical use only. It is accompanied by 'Notes on the Access to Medical Reports Act' and is designed to provide information to enable a full assessment of your patients fitness for their MOD role, which may include flying with children. It will be assessed by a doctor with training in aviation medicine.

Consent from your patient is above. Please complete the MAR from your patient's medical records (computer print outs as used for insurance purposes **are not** acceptable) and either post it to your patient's military medical unit or pass on to him/ her in a sealed envelope for delivery. It must reach the military medical unit within **60 days** of receipt.

A standard fee of £45 is payable plus VAT, if so registered. Due to financial constraints imposed upon it, MOD cannot approve sums in excess of this. To claim payment, please complete Sections 1 and 2 of the accompanying HR Form 382(A) and return to the address at Section 6 for processing and payment. Do not return the MAR together with the HR Form 382(A) as payment is handled by a non-medical department.

For clinical queries only, the Command Flight Medical Officer may be contacted at the below address.

When completing this form, please pay special attention to the following:

- Any condition which may lead to sudden incapacitation e.g. cardiac or neurological.
- Any condition which may impair judgment or reaction times e.g. psychiatric or neurological.
- Any condition which may lead to subtle incapacitation.
- Any condition affecting vision, speech, balance or hearing.
- Any condition which may be affected by changes in pressure e.g. respiratory or sinus.
- Any condition which may impair mobility.
- Any use of drugs whether prescribed, self administered, herbal, alternative remedies or illegal.

Completed MARs are to be sent to the payment.	**pFaotireditn'sc aniqliteriye snoendlyc, advigimedt forms pbat and from:** Command Flight Medical Officer Centre of Aviation Medicine RAF Henlow Hitchin Bedfordshire, SG16 6DN Email: AIR38Gp-CAM-CFMO-

FOR COMPLETION BY THE GENERAL PRACTITIONER

Patient's Surname:	Forenames:		Date of Birth:
QUESTIONS			**Notes**
1 Do you hold your patient's NHS medical records?	**Yes**	**No**	
2 Has your patient consulted you or a colleague in the past 15 months?	**Yes**	**No**	If yes, please give details below
3 Has your patient attended / is due to attend a hospital OPD, or have they been treated by a health profes sional o ther th an above in the past 15 months?	**Yes**	**No**	If yes, please give details below
4 Has any medication been prescribed on a regular or intermittent basis in the past 15 months?	**Yes**	**No**	If yes, please list medication and dose below
5 Does your patient have any long standing condition which could in your opinion impair flight safety?	**Yes**	**No**	If yes, please give details below
6 Does your patient have any other long standing condition?	**Yes**	**No**	If yes, please give details below
ADDITIONAL COMMENTS (please continue on a separate sheet if necessary). Copies of relevant hospital letters and/or GP consultations would be helpful. Your assistance is much appreciated.			

Have you been asked to amend this report?	Yes	No	
If Yes: - Why? - By whom? - Ammendements made?			

Doctor's Name: **GMC Number:**

Address: **Telephone Number:**

Signature: **Date:**

NOTES FOR CONSENT TO RELEASE INFORMATION - MEDICAL ATTENDANT'S REPORT

Information in this Medical Attendant's Report that you have been given to pass on to your doctor, will be released to the MOD medical authorities. You have certain rights under the Access to Medical

Reports Act 1988 regarding this MAR. Under the terms of the above Act:

1. If you give your consent, you have the right to see information about your medical history before it is supplied to the MOD. Please note that if you refuse consent to release medical information, it may result in your medical fitness for controlling or flying in MOD controlled or operated aircraft being withdrawn.

2. You will have 21 days from requesting the report in which to ask your doctor to let you see the MAR.

3. Your doctor will tell you if you cannot see any part of the report for medical reasons.

4. If you are given access to your report, your doctor will not send it to the MOD until you give your consent. However, your MOD Medical Officer must receive the report within **60 days** of it being requested.

5. If you regard any information in the medical report to be incorrect or misleading you can ask in writing for it to be amended. If your doctor does not accept that the information is incorrect or misleading, they are not required to make any amendment. However, in these cases, your doctor will invite you to prepare a written statement on the disputed information which will be attached to the questionnaire when it is sent to the MOD.

6. Subject to the provisions of the Act, you have the right to see your medical questionnaire for up to 6 months after it has been sent to the MOD. In these situations, if your doctor gives you a copy of the medical questionnaire, at your request, they may charge you a reasonable fee to cover the cost of supplying it.

FOR COMPLETION BY APPLICANT (IN BLOCK CAPITALS AND BLACK INK)

May the MOD approach your doctor/dentist for medical information?		Yes	No
If you wish to have access to the information on the medical questionnaire under the box.			
No – I do not wish to have access		Yes – I wish to have access	
Give the name and address of your doctor:			
I hereby give my consent for the release of information by my medical practitioner re signed.			
Surname:	Forenames:	Date of Birth:	
Address:	Signature and date:		

Access to M

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LEAFLET 4-02 ANNEX E: DOCUMENTATION REQUIRED FOR WAIVER OF INITIAL MEDICAL BOARDS AND ANNUAL PMEs

Under 60 years of age

AEF VR(T) / CONTRACTOR PILOTS / VGS INSTRUCTORS / AIRCRAFT CONTROLLERS

UNDER THE AGE OF 60 YEARS

Unrestricted EASA Part-Med Class 1 licence	No	Yes

Initial applicant Meeting the conditions at: Lflt 4-02 paragraph 6	Initial level 4 medical at parent medical centre if required.	Level 4 medical not required
	SOH	SOH
	MAR	MAR
		Class 1 or class 3 medical certificate
	Initial and age 40 bloods if not previously recorded	Initial and age 40 bloods if not previously recorded
	ECGMS reported ECG	
	Approval by R&SDOM	Approval by R&SDOM

Annual renewal: Lflt 4- 02 paragraph 17	Level 4 by medical centre MAME, supported by:	Waiver authorised at unit level, supported by:
	SoH	SoH
	MAR	MAR
		Class 1 or class 3 medical certificate
	Screening ECG as per Lflt 4-02 paragraph 41	
	MAME to sign logbook, valid for 12 months to end of month in which medical was undertaken	MAME to sign logbook, valid to the end of the month 1 year after the date of issue of the medical certificate

Over 60 years of age

AEF VR(T) / CONTRACTOR PILOTS / VGS INSTRUCTORS / AIRCRAFT CONTROLLERS

OVER THE AGE OF 60 YEARS

Unrestricted EASA Part-Med Class 1 licence	No	Yes

Initial applicant Meeting the conditions at: Lflt 4-02 paragraph 6	Initial level 4 medical at parent medical centre if required.	Level 4 medical not required
	SOH	SOH
	MAR	MAR
		Class 1 or class 3 medical certificate
	Initial and age 40 bloods if not previously recorded	Initial and age 40 bloods if not previously recorded
	ECGMS reported ECG	
	Enhanced cardiac screening	Enhanced cardiac screening
	Approval by R&SDOM	Approval by R&SDOM

Annual renewal: Lflt 4- 02 paragraph 17	Level 4 by medical centre MAME, supported by:	Waiver authorised by R&SDOM, supported by:
	SoH	SoH
	MAR	MAR
		Class 1 or class 3 medical certificate
	Enhanced cardiac screening	Enhanced cardiac screening
	Screening ECG as per Lflt 4-02 paragraph 49	
	MAME to sign logbook, valid for 12 months to end of month in which medical was undertaken	R&SDOM to sign logbook, valid to the end of the month 1 year after the date of issue of the medical certificate

NOTE: All aircrew flying with a flying helmet are required to have the fit checked annually by a MAME irrespective of whether their medical has been waived.

LEAFLET 4-02 ANNEX F: PME LOG BOOK STICKER (TEMPLATE)

For the formatting of adhesive labels (8 labels per A-4 sheet)

ANNUAL PME HELD AT RAF

	Name: Rank	DoB:
:		

JMES	Expiry Date End of:	Medical Officer	Signature
A L M E MFD MLD MND			

Limitations

1	
2	
3	
4	

LEAFLET 4-02 ANNEX G: REMOTELY PILOTED AIR SYSTEMS CLASSIFICATION[1]

Class	Category	Normal Employment	Normal Ope Altitude	Normal Mis Radius	Primary Suppo Commander	Example Platform
Class III (>600 kg)	Strike/Combat	Strategic/National	Up to 65k ft MSL	Unlimited (BLOS)	Theatre COM	Reaper
	HALE	Strategic/National	Up to 65k ft MSL	Unlimited (BLOS)	Theatre COM	Global Hawk
	MALE	Operational/Theatre	Up to 45k ft MSL	Unlimited (BLOS)	JTF COM	Heron
Class II (150-600 kg)	Tactical	Tactical Formation	Up to 10k ft AGL	200 km (LOS)	Bde Comd	Hermes 450
Class I (<150 kg)	Small (>15 kg)	Tactical Unit (Launch system)	Up to 5k ft AGL	50 km (LOS)	BN/Regt, BG	Scan Eagle
	Mini (<15 kg)	Tactical Sub-Unit (Manual launch)	Up to 3k ft AGL	25 km (LOS)	Coy/Sqd	Skylark
	Micro (<2 kg)	Tactical Sub-Unit (Manual launch)	Up to 200 ft AGL	5 km (LOS)	Pl, Sect	Black Widow

[1] https://modgovuk.sharepoint.com/sites/defnet/dsa/Documents/MAA/Regulation/MRP/1000/RA1600_Issue_7.pdf

LEAFLET 4-02 ANNEX H: FUNCTIONAL HEARING CHECKS

AIRCREW

1. Aircrew with hearing loss requiring a functional hearing check should have this performed in the aircraft type they currently fly, supervised by a QFI. The test should be conducted on a typical sortie using the full range of radio equipment, and should contain the following elements:

   a. Routine communications air to ground (controller).

   b. Routine communications air to air.

   c. Routine communications between cockpit/flight crew members.

   d. Simulated emergencies, including non-routine phraseology.

   e. Identification of navigation beacon signals

   f. Identification of audio warning devices.

2. The form at Lflt 4-02 Annex H Appendix 1 should be completed, and a copy kept with the medical record (scanned onto DMICP), and the aircrew personal record (series 5000).

3. Those failing a functional hearing check are to be referred to an Aviation Medicine trained service consultant in ORL and the Defence Audiological Service, requesting clinical review and assessment of speech frequencies. Pending review, the individual should be downgraded A-3 (MedLim 2000 or MedLim 2001).

4. A Functional Hearing Check should be repeated on the following occasions:

   a. Where clinically indicated.

   b. On change of aircraft type.

   c. On progression of hearing loss by greater than 25 dB(A) summed at the frequencies 1, 2 and 3 kHz from the level when the last test was performed.

CONTROLLERS

5. Controllers with hearing loss requiring a functional hearing test may have this performed locally by a qualified instructor, Unit Assurance Officer or Unit Examining Officer. The conditions must be conducted under representative traffic levels and with the use of either a Headset Mono Converter or the controllers chosen prosthetic. See also Lft 5-15 Para 9 to Para 11. Given the requirement for prosthetics and spares and given that such equipment may fail; any ATC who passes a functional hearing test with prosthetics is to be graded (MLD) A4 L4 M4 E3 with MedLims (2101) 'Fit to control only when another qualified controller is on duty and in close proximity' and (1208) 'Fit limited duties in trade

or branch - must wear approved hearing correction when flying or controlling aircraft'.

6. The form at Lflt 4-02 Annex H Appendix 2 should be completed and a copy kept with the medical record (scanned onto DMICP) and another with their personal record.

LEAFLET 4-02 ANNEX H APPENDIX 1: AIRCREW IN FLIGHT FUNCTIONAL HEARING ASSESSMENT FORM

1. PERSONAL DETAILS - SUBJECT

Name	Rank	Service Number	Date of birth

2. DETAILS OF TEST

Place of test:	Aircraft Type:	Tail Number:	Date of Test

Sortie Type:		Sortie duration:	

				Comments
Canthesubjecthearadequatelyintheaircraftduringallphasesof flight?	Yes	No	N/A	
Doestheirhearinglossinterferewiththeabilitytocommunicatewithair flight?	Yes	No	N/A	
Doestheirhearinglossinterferewiththeabilitytocommunicatewithoth flight?	Yes	No	N/A	
Doestheirhearinglossinterferewiththeabilitytocommunicatewithoth flight?	Yes	No	N/A	
Can he/she accurately identify non-routine R/T phraseology?	Yes	No	N/A	
Canhe/sheidentifyaccuratelytheidentificationsignalsofNavigation Beacons?	Yes	No	N/A	
Can he/she accurately identify audio warning devices?	Yes	No	N/A	
In your opinion, does his/her hearing loss interfere with flight safety?	Yes	No	N/A	
Have you any other observations or comments?	Yes	No	N/A	

3. DETAILS OF INDIVIDUAL SUPERVISING TEST

Name	Rank	Service Number:	Signature:

LEAFLET 4-02 ANNEX H APPENDIX 2 : AIRCRAFT CONTROLLER FUNCTIONAL HEARING ASSESSMENT FORM

1. PERSONAL DETAILS – SUBJECT

Name	Rank	Service Number	Date of birth

2. DETAILS OF TEST

Place of test:	ATC Position:	Date of Test:

Controlling Duty:		Controlling duration:	

				Comments
Can the subject hear adequately in the ATC environment during all phases of task?	Yes	No	N/A	
Does their hearing loss interfere with the ability to communicate with aircraft during all phases of task?	Yes	No	N/A	
Does their hearing loss interfere with the ability to communicate with other colleagues during all phases of task?	Yes	No	N/A	
Does their hearing loss interfere with the ability to communicate with other units during all phases of task?	Yes	No	N/A	
Can he/she accurately identify non-routine R/T phraseology?	Yes	No	N/A	
Can he/she accurately identify audio warning alarms?	Yes	No	N/A	
In your opinion, does his/her hearing loss interfere with flight safety?	Yes	No	N/A	
Have you any other observations or comments?	Yes	No	N/A	

3. DETAILS OF INDIVIDUAL SUPERVISING TEST

Name	**Rank**	**Service Number:**	**Signature:**

LEAFLET 4-02 ANNEX I: THE MANAGEMENT OF AIRCREW AND OTHERS FOLLOWING AN AIRCRAFT ACCIDENT OR INCIDENT

INTRODUCTION

1. This leaflet addresses neurological, orthopaedic, ophthalmological and psychological considerations, and details mandatory administration and treatment for accidents and incidents occurring within the UK. The management detailed within this leaflet applies equally to Service aircrew and civilian test aircrew working for QinetiQ and the Defence Aviation Repair Agency (DARA). It is recognised that there may be circumstances overseas where it is not possible to implement this policy in full, for operational reasons. For example, aircrew may be involved in an accident when embarked in ships or when on an operational deployment where full diagnostic facilities are not available. In such circumstances the MO responsible for the medical care of the aircrew concerned is to make every effort to meet the requirements of this policy within the limits of reasonably available resources. However, in peacetime, the confirmation of fitness to fly without adequate investigation might be indefensible. In such circumstances repatriation should be considered.

FURTHER READING

2. **This leaflet is to be read in conjunction with:**

a. AP 1269, Lflt 12-05, Management of Aircraft Accidents.

b. AP1269 Lflt 12-06, Management of Aircraft Incidents.

c. The Lflt 'The Management of Aircrew Following Ejection from an Aircraft' available from CFMO (RAF).

d. AP 100V-10, Post Crash Management Procedures, Aircraft, General.

TERMINOLOGY

3. CFMO (RAF) is the responsible RAF medical authority when managing individuals following an aircraft accident or incident. The CFMO (RAF) will be referred to throughout this leaflet, however, if an incident involves individuals from other services, the authorities listed below will become the 'responsible authority':

a. For the RN CA AvMed(RN).

b. For the Army CA AvMed(Army).

c. For the RAFMOD(PE), the single Service authority, listed above, of the Service responsible for the individual concerned. Where doubt exists contact DACOS Av Med.

4. The term 'supervising MO' means the MO tasked by the CFMO (RAF) to co-ordinate the clinical management of the casualty and to maintain liaison between the medical facility providing treatment and the service authorities.

SCOPE

5. It is clear when an individual has ejected or an aircraft has crashed; however, it may not be as clear when this policy should be implemented following an incident. For example, an incident such as an air-miss may be unremarkable in an engineering or physical sense, but may have a significant psychological effect upon individual crew members. Therefore, MOs are to exercise clinical judgement in deciding which incidents require application of this policy. Moreover, they are to maintain close liaison with the flying executive and other agencies, such as flight safety officers, to ensure that treatment is received by all who need it.

6. Throughout, this leaflet the term 'accident' also applies to incidents of medical significance. The policy will apply predominantly to aircrew; however, it is also to apply to passengers and non-aircrew members of crew, such as flight nurses and air stewards. Although this policy is concerned with the preceding categories of personnel, the MO must not forget the profound effect that an aircraft accident may have on those involved on the periphery, such as rescue workers, witnesses and the relatives of those directly involved in the accident.

CO-ORDINATION OF MANAGEMENT

7. All individuals involved in an aircraft accident are to be medically examined as soon as possible after the accident in accordance with Lflt 3-03, Annex A. The examining doctor can be a uniformed MO, a CMP, a General Practitioner or a hospital doctor. Contemporaneous notes are to be made detailing the patients' medical condition following the accident.

8. The CFMO (RAF) is to co-ordinate the management of individuals requiring medical intervention following an aircraft accident. In particular, he is to ensure that all aircrew have been assessed by the appropriate service consultants before returning to flying.

9. Where an aircraft accident occurs in the vicinity of the aircraft's home base, the SMO of the unit, or his deputy, is to assume responsibility for the care of those involved. **The CFMO (RAF) is to be notified of the accident immediately**. When an accident is remote from the home base of the aircraft, the CFMO (RAF) is either to nominate a MO to supervise care or to assume the role of supervising MO himself.

10. The supervising MO is to ensure that he is fully briefed on the case at all times and is to look after the interests of the patients and the Service. He is to be responsible for the day-to-day liaison on all medical matters between patients, civilian hospital medical and administrative staffs, service consultants and consultant advisers and the CFMO (RAF). He is also to notify the parent station or unit executive of the medical situation.

11. If it is necessary for an individual to see more than one service consultant, the supervising MO is to make arrangements for all appointments to be completed in one visit. Any difficulty in arranging appointments on the same day is to be discussed with CFMO (RAF).

MANAGEMENT

12. All aircrew and passengers are to undergo medical examination in accordance with Lflt 3-03, Annex A, paragraph 6b, after an aircraft accident. A record is to be made of any injuries and psychological sequelae. Civilian passengers should be offered an examination prior to being advised to attend their own GP. Considerations in the management of head and spinal injury, ophthalmic injury and psychological and psychiatric conditions in personnel following an aircraft accident are found in Section 5 as detailed below:

a. Spinal Injury Lflt 5-13.

b. Ophthalmic Injury Lflt 5-14.

c. Psychiatric Considerations Lflt 5-12.

FOLLOW-UP

13. Prolonged follow-up of those involved in an aircraft accident may be necessary, particularly from a psychological standpoint. In the first instance this follow-up is the responsibility of the SMO who may seek further specialist advice if this is clinically indicated.

14. Following clearance by the appropriate specialists, all individuals are to be seen by their unit MO for an assessment of their fitness to return to work or flying. The MO is to satisfy himself that the individual is fully fit for all aspects of his job. Any doubts about fitness should be discussed with the CFMO (RAF) and appropriate specialists.

15. For the first year following return to work, individuals are to be reviewed at least six monthly to confirm continuing fitness. Thereafter, if review is necessary, aircrew can be monitored at their periodic medical examination. To prevent loss of surveillance on posting, the losing MO is to notify the gaining MO of individuals who have been involved in an aircraft accident.

LEAFLET 4-02 ANNEX J: FITNESS FOR SHORT TERM AIR SUPPLY SYSTEM (STASS) WET DRILL TRAINING

Introduction

1. Aircrew and other personnel who are required to undertake STASS wet drill training in the Dunker have a very small risk of suffering Cerebral Arterial Gas Embolism (CAGE). To minimise the risk of CAGE individuals undergoing training are issued with a questionnaire designed to screen out those at risk.

Questionnaire

2. The questionnaire is available at MAA Regulatory Article 2130, Annex D and requires no involvement from medical staff unless there is a positive response to any of the questions in Part B. Guidance for medical staff is given at Part C.

Medical Requirements

3. The medical requirements for the cardiovascular and respiratory systems for sports diving listed at Lflt 3-03 Annex D, are to be used as a guide. If in doubt about an individual's fitness to undergo STASS wet drill training MOs are to seek Specialist advice from the Head of Undersea Medicine at the Institute of Naval Medicine (INM).

4. Aircrew undergoing wet STASS training must have an unrestricted aircrew JMES and acceptable spirometry within the last 12 months. Mass flow spirometry is acceptable. The ratio of FEV1/FVC should not be less than 70% and the FVC should not be abnormally low compared to that predicted by age, gender and height (refer to RN BRd 1750A Ch 12 for further details). The medical fitness to undergo STASS training should be annotated in the aircrew log book as 'Fit wet STASS training', 'Fit dry STASS training' or 'Unfit STASS training' (further guidance may be sought from CA AvMed (RN) or Head of Diving Medicine).

Limitations

5. Aircrew who are found to be unfit to undertake wet STASS training are to have the JMES amended to A-3, with the restriction 'Unfit wet STASS training' or ' Unfit helicopter underwater escape training' These limitations enable the executive to identify affected aircrew and the duty holder to risk assess future deployability.

LEAFLET 4-02 ANNEX K: MEDICAL REQUIREMENTS – HYPOXIA TRAINING AND POSITIVE PRESSURE BREATHING

Background

1. Hypoxia and altitude related training and experience is provided in accordance with NATO STANAG 3114[1], but this is not confined solely to aircrew. Both military personnel in ground roles and civilian subjects are also exposed to such training. This Annex provides details of the evidence of medical fitness required for hypobaric and / or hypoxia exposure conducted at RAF CAM.

Training

2. Hypoxia training is delivered either by hypobaric chamber exposure or Scenario-Based Hypoxia Training (SBHT). Traditionally, aircrew and other eligible personnel underwent altitude and hypoxia training in a hypobaric chamber. Although this is still appropriate for *ab initio* aircrew candidates, refresher and other trainee groups undergo SBHT, in which subjects breathe a reduced-oxygen gas mix at ground level whilst operating a simple flight simulator or performing other flight relevant tasks[2]. Fast jet aircrew are also required to experience positive pressure breathing either at ground level or as part of hypobaric training.

Risks

3. **SBHT**. The primary medical risks relevant to ground-level hypoxia exposure are pre-existing neurological or cardiorespiratory conditions. Some haematological disorders are also relevant e.g. anaemia, thalassaemias and sickle cell disease.

4. **Hypobaric chamber exposure**. In addition to the above risks, training in a hypobaric chamber also introduces significant pressure changes in a confined space[3]. The past medical history is therefore additionally screened for:

a. Disorders that may masquerade as, or predispose to, decompression sickness (e.g. migraine, vertigo, dizziness and bone and joint conditions);

b. Psychiatric conditions;

c. Conditions that may impair emergency escape (e.g. orthopaedic problems)

d. Conditions vulnerable to gas expansion (e.g. ear, nose and throat disease or untreated herniae).

5. **Positive pressure breathing**. Positive pressure breathing at up to 30mmHg (55mmHg for Typhoon aircrew) introduces risks related to gas expansion within the lung

[1] https://nso.nato.int/nso/zPublic/ap/PROM/AAMedP-1.2%20EDA%20V1%20E.pdf
[2] A Reduced Oxygen Breathing Device (ROBD) mixes nitrogen with breathing air to produce the sea level equivalent atmospheric oxygen contents for altitudes up to 25,000 feet.
[3] When in operation the hypobaric chamber constitutes a confined space under the Confined Spaces Regulations 1997: http://www.hse.gov.uk/pubns/priced/L-101.pdf

and thorax, and ear nose and throat. It may also induce circulatory changes leading to potential vaso-vagal collapse.

Medical Requirements

6. **Aircrew**. In accordance with RA 2135(6)[4], all aircrew in military aircraft undergo 5-yearly aviation medicine training. There is usually an initial hypobaric chamber experience; subsequent refresher training is then via SBHT. For these individuals,

a. **JMES A-1/A-2 L-2 M-4 E-2 or better**. A valid unrestricted aircrew JMES provides adequate evidence that the relevant medical standards for both SBHT and hypobaric chamber training have been met.

b. **JMES below A-1/A-2 L-2 M-4 E-2**. Downgraded aircrew are to be assessed by a MAME to confirm fitness for training, using Appendix 1 if appropriate. In such cases a targeted medical examination may be necessary, as dictated by their occupational limitations or underlying clinical disorder. Their disposal will depend on the outcome of this assessment:

(1) **Unfit**. There are likely to be significant occupational consequences for aircrew found unfit this training. All cases are to be discussed with the sS aeromedical authorities (CA AvMed, CFMO, occupational medicine department or medical board).

(2) **Fit but condition may change**. If aircrew are found fit for training but this status may change in the future then the decision is to be recorded on their iHR. The individual concerned is to attend for training with either a completed Appendix 1 or FMed 566.

(3) **Fit, stable clinical condition**. If their clinical condition is stable (or not clinically relevant to this training) and they are found fit then this fact should be documented in their aircrew logbook. This statement will then remains valid, subject to annual review at the aircrew PME, unless the JMES or clinical condition changes.

Cases can also be discussed with the Chief Instructor at RAF CAM.

1. **Military personnel – non-aircrew regular fliers**. Non-aircrew military personnel who regularly fly as part of their duties (e.g. ISTAR mission crew, Air Stewards, Air Dispatchers, PJI and aeromedical staff) are to be screened as follows:

a. **SBHT**. All personnel in date for an annual level 3 or 4 medical examination[5] holding an MES no lower than A-4 L-2 M-4 E-1 are considered fit for SBHT and positive pressure breathing without further screening. All others are managed as 'other personnel' below.

[4] https://modgovuk.sharepoint.com/sites/defnet/dsa/Pages/MAA-regulatory-publications.aspx
[5] See Lflt 3-02 Annex A

b. **Hypobaric chamber exposure**. Personnel undergoing a chamber experience are to be medically examined at unit level prior to attending RAF CAM, using Appendix 1 to this Lflt. If found fit, the individual concerned is to attend for training with the completed Appendix 1. Military personnel presenting with evidence of a current Service diving medical examination[6] may use this in lieu of Appendix 1.

8. **Category 1 or 2 (frequent) flying**. Any personnel without an aircrew medical category (including non-aircrew military personnel and civilians) may undertake high performance military passenger flying. As defined in Annex C of this Lflt, they are sometimes required to undergo hypoxia training (usually via SBHT). Prior to attending RAF CAM for hypoxia training, all subjects are to be medically examined by a doctor with access to the medical record (usually their general practitioner), using Appendix 1 to this Lflt[7]. If found fit the individual concerned is to attend for training with the completed Appendix 1. Exemptions to this are detailed in para 6b of this Annex.

9. **Other personnel**. There are occasions other than passenger flying when civilian or military personnel are required to undergo a hypobaric chamber or SBHT experience or training. Examples include civil servants, civilian contractors, medical and science researchers, volunteers taking part in hypobaric research, film crews and presenters or other selected subjects. These individuals may not be intending to fly in high performance aircraft and, therefore, would not be required to meet the medical standards contained in Para 7 of this Annex. They will, however, be required to meet minimum standards for a hypoxic and/or hypobaric experience. Accordingly, a doctor with access to the subject's primary care record (usually their registered GP) should complete Appendix 1 to this Lflt, documenting any relevant medical history and examination findings. The individual is to attend RAF CAM with the completed Appendix 1.

Duration

10. For all candidates, a series of SBHT or chamber runs undertaken within a 6-month period in order to complete a specific operational task are considered a single exposure for the purpose of medical screening.

11. The medical examination at Appendix 1 to this Lflt should usually be completed within 28 days of training; however, once complete the medical screening will be valid for 6 months, provided that the individual certifies that there have been no changes in their medical history since the initial examination. Immediately before undergoing hypobaric chamber training, all personnel will have a short medical inspection to confirm their fitness, at which the Medical Officer in Charge of the hypobaric chamber will review the completed Appendix 1 (or aircrew JMES as appropriate), and will assess the individual's ability to 'clear' their ears.

Limitations

[6] See BRd 1750(A) Chapter 12

[7] For military personnel a MAME or Medical Board (with access to the primary care record) could combine the medical examinations for hypoxia training and passenger flying. For subjects with a civilian GP their passenger medical is to be undertaken separately by military medical services. The completed Appendix 1 should be brought to that medical.

12. In all cases where Appendix 1 to this Lflt is used (or Service Occupational Divers medical examination accepted in lieu), a maximum chamber altitude of 25,000 feet, including experience of rapid decompression and hypoxia, is permitted.

LEAFLET 4-02 ANNEX K, APPENDIX 1: MEDICAL FITNESS FOR HYPOXIA TRAINING AND POSITIVE PRESSURE BREATHING

The following medical questionnaire and examination (where required) is for use when individuals are to be exposed to hypobaric hypoxia in a hypobaric chamber, scenario-based hypoxia training (SBHT) at ground level, and/or positive pressure breathing training. The completing doctor is to have access to the subject's primary care record.

1. **Personal Details** (*To be completed by the individual).*

Surname:		Forenames:		Date of Birth:	
Service / Staff No:		Rank / Title:		Branch:	

2. **Medical History** (*To be completed by the individual).* Have you ever had any of the medical problems listed below? You should only undergo hypobaric training / SBHT if you are fit and well. If you are currently undergoing medical treatment, investigations or have recently suffered an injury, please inform the medical / nursing officer.

Chest or lung disease	Yes / No	Anxiety, depression or any mental illness	Yes / No
Asthma, wheeze or recurrent	Yes / No	Headaches or migraine*	Yes / No
Pneumothorax (collapsed lung)	Yes / No	Epilepsy, blackouts, fits or faints	Yes / No
Heart disease	Yes / No	Vertigo, dizziness or loss of balance*	Yes / No
Chest surgery	Yes / No	Decompression illness ('the bends')	Yes / No
Any blood disorder (e.g. anaemia)	Yes / No	Problems with mobility, bones, joints or muscles*	Yes / No
Ear, nose, sinus or throat problem	Yes / No	Perforated eardrum	Yes / No
Hay fever	Yes / No	Hernia	Yes / No
Any other medical problems	Yes / No	If Yes please describe:	

* Conditions that may mimic decompression illness

Females Only	
Are you, or is there a possibility you may be pregnant?	Yes / No

3. **Additional Information** (*To be completed by the doctor*). Please elaborate briefly on any positive answers above and provide further information where any discrepancies exist between the answers and the individual's medical record.

4. **Medication** (*To be completed by the individual or doctor*). Please list all current medications:

5. **JMES** (*To be completed by the doctor*). For military personnel, please ensure that the JMES is provided either from JPA or from the individual's DMICP record.

Current Joint Medical Employment (JMES):	Standard L M E

6. **Medical Examination** (*To be completed by the doctor*). Only required for non-aircrew or aircrew with a JMES of A-3L-2 or below.

Pulse rate	

Blood Pressure	

Cardiovascular system	Normal / abnormal
Respiratory system	Normal / abnormal

Neurological system	Normal / abnormal
Abdomen	Normal / abnormal

Ears		Left	Right
Tympanic membranes	Visualised	Yes / No	Yes / No
	Normal appearance and mobile	Yes / No	Yes / No

Please document any other examination as clinically or occupationally required, e.g. in response to an existing medical problem or positive answers in the medical history:

7. **Certification.** I have reviewed the medical record and examined the individual as documented above.

Signature: Date:

Name: Rank / Title: Position:

8. **Pre-Training Declaration** (*to be completed by the individual on the day of training).*

I confirm that my medical history has not changed since the medical examination above (if undertaken).

I have / have not participated in diving (including SCUBA/sub aqua and STASS) within the last 72 hours (delete as applicable).

I consent / do not consent to medical examination prior to or after hypoxia training (delete as applicable).

I consent / do not consent to the medical officer reviewing my electronic health record if necessary to confirm my fitness to undergo hypoxia training (delete as applicable).

9. **Hypobaric chamber training only**

I understand that audio/video recordings will be retained for safety purposes such as incident investigation.

I consent / do not consent to the use of my audio/video recording for training purposes (delete as applicable).

I understand that I must remain at RAF CAM for up to 2 hours following hypobaric training (medical officer to advise).

Signature: Date:

Name: Rank / Title:

Surname:		Forenames:		Date of Birth:	

10. **Pre-training review (***to be completed by RAF CAM medical staff immediately prior to training).*

For hypobaric training only:

Ears		Left	Right
Tympanic membranes	Visualised	Yes / No	Yes / No
	Normal appearance and mobile	Yes / No	Yes / No

Confirmation of medical fitness to participate in training:

SBHT / Hypobaric chamber / positive pressure breathing*	**FIT**	**UNFIT**
If unfit, reason:		

* delete as applicable

Signature: Date:

Name: Rank / Title:

LEAFLET 4-02 ANNEX L: LOSS OF CONSCIOUSNESS (G-LOC) IN AIRCREW

INTRODUCTION

1. G-LOC occurs when cerebral perfusion is interrupted by exposure to +Gz acceleration. Career prevalence of G-LOC in the RAF is around 20%, and it occurs most commonly in training aircraft due to lack of pilot experience (and lack of anti-G suit in the Tucano). G-LOC should be considered a normal physiological reaction to excessive +Gz acceleration, and in general is not indicative of a medical condition. The role of the MO is generally one of support and education, as below.

CAUSES

2. G-LOC is associated with:

   a. High peak +Gz acceleration.

   b. Rapid application of +Gz acceleration (high G onset rate).

   c. Unexpected application of +Gz (e.g. non-handling aircrew).

   d. Preceding –Gz exposure.

   e. Aircraft without G protection.

   f. Inexperience with poor or absent anti-G straining manoeuvre (AGSM).

   g. Dehydration.

   h. Fatigue.

   i. Concurrent ill health (and / or its treatment, including OTC medication).

   j. Reduced blood glucose concentration or missed meal.

   k. Hyperventilation and hypoxia.

   l. Raised body temperature.

RESPONSIBILITIES OF THE MO

3. In cases where an aircrew member presents having suffered from G-LOC, the MO is to determine the circumstances leading to the episode of G-LOC in accordance with Annex A to this Lflt. Open reporting of G-LOC incidents by aircrew members (e.g. via DASOR) is to be encouraged. G tolerance and cognitive performance may be reduced for a considerable period following G-LOC: following such an incident aircrew should be advised not to fly for the remainder of the day and until a satisfactory night's sleep has been gained. Advice and guidance relating to the factors listed in paragraph 2 above

should be given.

4. If an aircrew member is unable to tolerate levels of +Gz acceleration typically expected of someone at his or her stage of training, or G-LOC is recurrent, then a full history, examination and an ECG will usually be sufficient to exclude an underlying cardiovascular disorder. If this is not possible, or doubt remains, then the individual should be referred to Aviation Medicine Clinical Service (AMCS). The case should be discussed with CFMO and (when investigation is complete) referral to the RAF CA AvMed is advised. This will facilitate specialist investigation and retraining, including centrifuge, RAF CAM AvMed flight assessment and AGSM revision as required. Under these circumstances, to minimise the risk of further G-LOC, aircrew are to be temporarily restricted to a G range of -1 to +4G_z.

LEAFLET 4-02 ANNEX M: MEDICAL REQUIREMENTS – HIGH G TRAINING (HUMAN CENTRIFUGE)

Background

1. High G training is conducted in accordance with NATO STANAG 3827, but this is not confined solely to aircrew. Both military personnel in ground roles and civilian subjects may also be exposed to such training. This Annex provides details of the evidence of medical fitness required for high G training and high G experience conducted by RAF CAM.

Training

2. High G training is conducted using a human centrifuge (the only UK facility is operated by Thales at RAF Cranwell). The level of G employed, and the protective equipment use will vary depending on the specific aircraft platform for which the training is being provided. Typically most aircrew will be required to demonstrate competence at +7Gz, and Typhoon aircrew will be required to achieve +9Gz. Others (including medical officers) will receive training relevant to their stage of training and role, usually not exceeding +4.5Gz.

Risks

3. The primary medical risks relevant to high G exposure are pre-existing cardio-respiratory and musculo-skeletal conditions (especially the cervical, lumbar and thoracic spine). Performance of the anti-G straining manoeuvre is physically demanding and requires a good level of physical fitness. The use of positive pressure breathing for G protection may exacerbate certain pulmonary conditions, and ear, nose and throat diseases. The circular motion of the centrifuge and the action of the force environment on the middle ear may exacerbate balance related disorders. Although G-Induced Loss of Consciousness is a recognised possible outcome of high G exposure, it is not usually associated with long term sequelae. However, additional risks may be present under these conditions in individuals with epilepsy or other neurological disorders.

Medical Requirements

4. **Aircrew**. In accordance with RA 2135, all aircrew in military fast jet aircraft undergo 5-yearly centrifuge based high G training. For these individuals:

a. **JMES A-1/A-2 L-2 M-4 E-2** or better. A valid unrestricted aircrew JMES provides adequate evidence that the relevant medical standards for high G training have been met.

b. **JMES below A-1/A-2 L-2 M-4 E-2**. Downgraded aircrew are to be assessed by a MAME to confirm fitness for training, using Appendix 1 if appropriate. In such cases a targeted medical examination may be necessary, as dictated by their occupational limitations or underlying clinical disorder. Their disposal will depend on the outcome of this assessment:

(1) **Unfit**. There are likely to be significant occupational consequences for aircrew found unfit this training. All cases are to be discussed with the sS aeromedical authorities (CA AvMed, CFMO, occupational medicine department or medical board).

(2) **Fit but condition may change**. If aircrew are found fit for training but this status may change in the future then the decision is to be recorded on their iHR. The individual concerned is to attend for training with either a completed Appendix 1 or FMed 566.

(3) **Fit, stable clinical condition**. If their clinical condition is stable (or not clinically relevant to this training) and they are found fit then this fact should be documented in their aircrew logbook. This statement will then remain valid, subject to annual review at the aircrew PME, unless the JMES or clinical condition changes.

Cases can also be discussed with the Lead Medical Officer in charge at RAF CAM.

5. **Category 1 (frequent) flying**. Any personnel without an aircrew medical category (including non-aircrew military personnel and civilians) may undertake high performance military passenger flying. Personnel who have been passed fit for Category 1 frequent flying, as defined in Annex C of this Lflt, will be considered as fit for high G training. The individual is to attend with evidence of the completed Category 1 (frequent) flying medical.

6. **Other personnel**. There are occasions when other military personnel or civilians are required to undergo high G experience or training. Examples include medical personnel, civil servants, civilian contractors, medical and science researchers, volunteers taking part in research, film crews and presenters or other selected subjects. These individuals may not be intending to fly in high performance aircraft and, therefore, would not be required to meet the medical standards contained in Para 5 of this Annex. They will, however, be required to meet minimum standards for high G exposure:

a. **Centrifuge experience up to and including +4.5Gz**. For centrifuge experience up to and including exposure to +4.5Gz, a copy of the medical screening questionnaire at Appendix 2 should be completed by each participant and reviewed by the supervising medical officer at the time of training.

b. **Centrifuge training up to and including +9Gz**. A doctor with access to the subject's primary care record (usually their MO or registered GP) should complete Appendix 1 to this Lflt, documenting any relevant medical history and examination findings. The individual is to attend RAF CAM with the completed Appendix 1.

Duration

7. For all candidates, a series of centrifuge runs undertaken within a 6-month period in order to complete a specific operational task are considered a single exposure for the purpose of medical screening.

8. The medical examination at Appendix 1 to this Lflt should usually be completed within 28 days of training; however, once complete the medical screening will be valid for 6 months, provided that the individual certifies that there have been no changes in their medical history since the initial examination. Immediately before undergoing high G exposure, individuals without a valid unrestricted aircrew JMES will be asked to re-confirm their fitness, and the Medical Officer in Charge of the centrifuge training will review the completed Appendix 1. For those individuals undergoing centrifuge experience up to +4.5Gz, the medical screening at Appendix 2 will be valid for the day of centrifuge experience only.

Limitations

9. The medical requirements herein provide evidence of medical fitness for exposure at up to and including +9Gz on a human centrifuge under the direction of RAF CAM personnel.

Appendices:

1. Medical examination for high G training (human centrifuge).

2. Medical screening for high G experience (human centrifuge).

LEAFLET 4-02 ANNEX M, APPENDIX 1: MEDICAL EXAMINATION FOR HIGH G TRAINING (HUMAN CENTRIFUGE)

The following medical questionnaire and examination is for use when individuals are to be exposed to high G (up to +9Gz) on a human centrifuge. The completing doctor is to have access to the subject's primary care record.

1. **Personal Details** *(To be completed by the individual).*

Surname:		Forenames:		Date of Birth:	
Service / Staff No:		Rank / Title:		Branch:	

2. **Medical History** (*To be completed by the individual).* Have you ever had any of the medical problems listed below? You should only undergo centrifuge training if you are fit and well. If you are currently undergoing medical treatment, investigations or have recently suffered an injury, please inform the medical officer.

Chest or lung disease	Yes / No	Anxiety, depression or any mental illness	Yes / No
Asthma, wheeze or recurrent	Yes / No	Headaches or migraine	Yes / No
Pneumothorax (collapsed lung)	Yes / No	Epilepsy, blackouts, fits or faints	Yes / No
Heart disease	Yes / No	Vertigo, dizziness or loss of balance	Yes / No
Chest surgery	Yes / No	Ear, nose, sinus or throat disorder, including perforated eardrum	Yes / No
Any blood disorder (e.g. anaemia)	Yes / No	Musculoskeletal disease, and in part	icular, Yes / No or back neck
Hernia	Yes / No	Loss of sensation or weakness in arms or	Yes / No
Any other medical problems	Yes / No	If Yes please describe:	

Females Only

Are you, or is there a possibility you may be pregnant?	Yes / No

3. **Additional Information** (*To be completed by the doctor).* Please elaborate briefly on any positive answers above and provide further information where any discrepancies exist between the answers and the individual's medical record.

4. **Medication** (*To be completed by the individual or doctor*). Please list all current medications:

5. **JMES** (*To be completed by the doctor*). For military personnel, please ensure that the JMES is provided either from JPA or from the individual's DMICP record.

Current Joint Medical Employment (JMES):	Standard L M E

6. **Medical Examination** (*To be completed by the doctor*). Only required for non-aircrew or aircrew with a JMES of A-3L-2 or below.

Pulse rate	

Blood pressure	

Cardiovascular system	Normal / abnormal
Respiratory system	Normal / abnormal
Musculo-skeletal system	Normal / abnormal

Neurological system	Normal / abnormal
Abdomen (inc hernial orifices)	Normal / abnormal

Please document any other examination as clinically or occupationally required, e.g. in response to an existing medical problem or positive answers in the medical history:

7. **ECG** *(To be completed by the doctor)*

12 Lead ECG (machine reported result)	Normal / abnormal / further investigation required

8. **Certification.** I have reviewed the medical record and examined the individual as documented above.

Signature: Date:

Name: Rank/Title: Position:

9. **Pre-training declaration** (*To be completed by the individual on the day of training*). I confirm that my medical history has not changed since the medical examination above.

I understand that audio/video recordings will be retained for safety purposes such as incident investigation.

I consent / do not consent to the use of my audio/video recording for training purposes (delete as applicable).

Signed:

Name: Date:

10. **Pre-Centrifuge review** (*To be completed by RAF CAM medical staff*).

Medical fitness for high G centrifuge exposur to (up	**F T**	**UNFIT**

Signature: Date:

Name: Rank/Title:

LEAFLET 4-02 ANNEX M, APPENDIX 2: MEDICAL SCREENING FOR CENTRIFUGE EXPERIENCE (HUMAN CENTRIFUGE)

The following medical self declaration questionnaire is for use when individuals are to be exposed to increased G (up to +4.5Gz) on a human centrifuge.

7. **Personal Details**

Surname:		Forenames:		Date of Birth:	
Service / Staff No:		Rank / Title:		Branch:	
JMES (if known)	A L M E				

8. **Medical History** (*To be completed by the individual).* Have you ever had any of the medical problems listed below? You should only undergo centrifuge training if you are fit and well. If you are currently undergoing medical treatment, investigations or have recently suffered an injury, please inform the medical officer.

Chest or lung disease	Yes / No	Anxiety,depressionoranymental illness	Yes / No
Asthma, wheeze or recurrent	Yes / No	Headaches or migraine	Yes / No
Pneumothorax (collapsed lung)	Yes / No	Epilepsy, blackouts, fits or faints	Yes / No
Heart disease	Yes / No	Vertigo, dizziness or loss of balance	Yes / No
Chest surgery	Yes / No	Ear, nose, sinus or throat disorder, including perforated eardrum	Yes / No
Any blood disorder (e.g. anaemia)	Yes / No	Musculoskeletal disease, and in particular neck or back problems	Yes / No
Hernia	Yes / No	Loss of sensation or weakness in arms or legs	Yes / No
Any other medical problems	Yes / No	If Yes please describe:	

Females Only

Are you, or is there a possibility you may be pregnant?	Yes / No

9. **Additional Information**. Please elaborate briefly on any positive answers above.

10. **Medication**. Please list any current medications:

11. **Pre-training declaration** (*To be completed by the individual on the day of training*). I confirm that my medical history has not changed since the medical declaration above.

I understand that audio/video recordings will be retained for safety purposes such as incident investigation.

I consent / do not consent to the use of my audio/video recording for training purposes (delete as applicable).

Signed:

Name: Date:

6. **Pre-Centrifuge review** (*To be completed by RAF CAM medical staff*).

Medical fitness for high G centrifuge exposup to (u	**FIT**	**UNFIT**

Signature: Date:

Name: Rank/Title

LEAFLET 5-14: OPHTHALMOLOGY

Sponsor: DCA in Ophthalmology

INTRODUCTION

1. Visual defects and ophthalmic conditions are significant disabilities that frequently result in the rejection of candidates at selection. This is particularly true of aircrew applicants where the highest standards are demanded. As eyesight changes with age, it is
essential to reassess visual acuity (VA) at regular periods.

2. Visual standards for RAF branches and trades are detailed in AP1269A Section 4. Aircrew have stringent standards reflecting the importance of good eyesight in maintaining
mission effectiveness and flight safety. Although only distance VA standards are stipulated
for ground branches and trades, ocular function should nonetheless be adequate for the proposed duty of the individual being assessed.

Medical examiners need to have a thorough understanding of basic eye examination techniques in order to ensure test reliability. The notes at Lflt 5-14 Annex A will assist but are not intended to replace standard texts on examination methods. The advanced eye examination techniques required for aircrew selection require more sophisticated expertise and technology, including refraction and corneal mapping.

POLICY

3. RAF Recruits. The Defence Medical Services' (DMS) ophthalmology policy for candidates applying to join the UK military services is contained within JSP 950 lflt 6-7-7 section 4 Annex A and sets the minimum standards for all potential recruits. For RAF candidates, higher standards may be required for certain trades and branches. This leaflet
expands on DMS ophthalmology policy where RAF requirements vary.

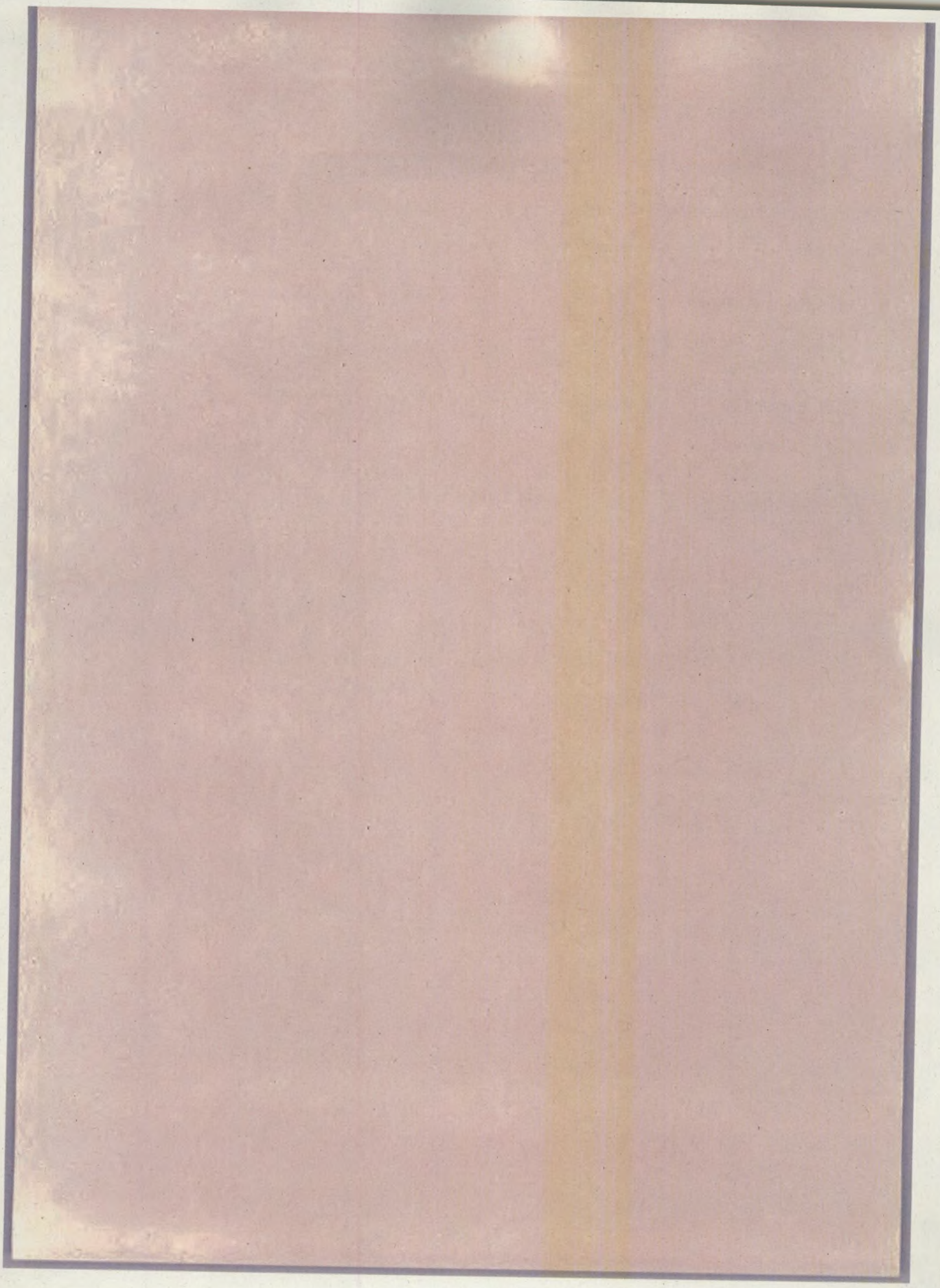
4. RAF Serving Personnel. The DMS' ophthalmology policy for UK military personnel is contained within JSP 950 !fit 6-7-7 section 4 Annex A and sets the minimum standards for all serving personnel. For RAF personnel however, increased standards may be required for certain trades and branches. This leaflet expands on DMS ophthalmology policy, where RAF requirements vary.

5. UK Military Aircrew and Controllers. This leaflet is the authorative ophthalmology policy document for all UK military aircrew and aircraft controllers'.

INDEX

6. An index of ophthalmology conditions is available overleaf:

' As recognised by the Standing Committee on Aircrew Medical Standards and the Surgeon General's Medical Policy Steering Group



Pterygium			4A.02E
Ptosis			4A.02C
Refractive Errors			4A.02A
Retinal detachment	Para 23		4A.021
Retinal Disease	Para 22		4A.021
Retinitis	Para 22		4A.021
Retinitis Pigmentosa	Para 22		4A.021
Scleritis			4A.02J
Scotoma			4A.02A
Strabismus	Para 25		4A.02B
Uveal Tract - Coloboma			4A.02H
VF defects	Annex A & Annex D	5A.01B1	4A.02A

ablating the underlying stromal bed, before replacing the flap. Disruption of the epithelial layer is kept to a minimum and this avoids the aggressive healing response that leads to the formation of haze. Pain is also minimised and visual recovery occurs within 1-2 days. For those with low levels of myopia, outcomes in terms of visual performance for all of these techniques are very similar.

a. Recruits. See JSP 950 Leaflet 6-7-7 section 4 Annex A

b. Serving Personnel. The methods of surgical correction of myopia listed in JSP 950 Leaflet 6-7-7 section 4 Annex A may be considered suitable for serving personnel on an individual, case by case basis. Serving personnel identified as having previously undergone such surgical operations are to be referred to a Defence Ophthalmologist prior to Medical Boarding action. In order to be considered for a grading of P2 all personnel who have undergone refractive surgery must fulfil the criteria listed in JSP 950 Lflt 6-7-7 Section 5 Annex A paragraph 5. In view of the potential complications of the procedure and the effects of medical downgrading on career prospects and postings, personnel contemplating refractive surgery are to be managed as detailed below:

(1) Counselling is to be given by a MO who must emphasise that failure of the individual to meet the required standards as detailed above will result in them being regraded no higher than P3; significant deterioration in vision may require the award of P7 or P8. A written record of the counselling is to be recorded in the individual's medical record.

(2) After receiving counselling, individuals may undergo surgery at their own expense, following the procedure detailed in AP1269 Lflt 6-04.

(3) The individual is to be downgraded E-5, MedLim 5002'Unfit service outside base areas' approximately 2 weeks before surgery.

(4) If the surgery is successful, the individual may be upgraded to their former JMES after 6 months, once the eye has stabilised.

(5) If the surgery fails, the patient is to remain downgraded and is to be referred to the DCA Ophth.

(6) Ground personnel are permitted to fly as passengers following CRS

c. Aircrew. The aircrew population in general has low myopia, increasing the chance of surgical success and reducing the incidence of surgical complications such
as loss of contrast sensitivity and night vision abnormalities. Careful pre and postoperative assessment is required to ensure flight safety. Therefore, the MO is to refer all aircrew who are contemplating CRS to the DCA Ophth. Aircrew are to be made aware of the following:

(1) With the exception of Service-provided pre and postoperative assessments, the cost of all surgery, follow-up, and any additional treatment for complications, is to be borne by the individual. (Candidates for surgery are to sign a certificate of understanding at Lflt 6-04 Annex A).

(2) As the surgery is non-essential and would adversely impact on short to medium term availability for flying duties, aircrew are to be advised to defer treatment until they are on a non-flying tour. The individual is to obtain their line

accepted subject to the following criteria:

(1) CRS by PRK, LASEK and LASIK only.

(2) A minimum of 6 months to has elapsed since surgery

(3) Minimum age at application of 22 years old.

(4) Subject's refraction to have been stable for at least 3 months.

(5) Recorded pre-operative ametropia must not exceed —5.00 to +2.00 dioptres in any meridian

(6) Post perative VA within current aircrew visual recruitment limits

(7) If the preceding criteria are met, candidates are to be referred to DCA Ophth for assessment as at paragraph 10c (4) (c). R&S DOM will continue to screen all aircrew candidates using corneal topography to identify those with undeclared CRS.

11. Keratoconus. Keratoconus is normally a bilateral condition of young adults causing blurred vision and corneal scarring. Disposal of individuals requiring a corneal graft is detailed at paragraph 9.

a. Recruits. Unfit for entry.

b. Serving Personnel. If detected within the first six months of service, boarding under QR 607(16) is appropriate. For other serving personnel, regular ophthalmic assessment is required. An E-2 category MedLim 1300- 'Medical marker (no functional limitation)' is appropriate for mild cases. Limitations are dictated by the degree of visual impairment. Visual correction varies with the severity of the disease and is treated with spectacles, hard contact lenses or occasionally by performing a penetrating or deep lamellar keratoplasty.

c. Aircrew. Hard contact lenses are not normally permitted for aircrew use. DCA Ophth will advise on continued fitness to fly.

INFLAMMATORY EYE DISEASE

12. Anterior—iritis I irido-cyclitis. Anterior uveitis causes pain, photophobia, loss of VA and posterior synechiae, it is characteristically recurrent.

a. Recruits. Uveitis (or a past history of) anterior, intermediate or posterior (syn: iritis, pars-planitis, vitreitis, choroiditis) will usually be a bar to entry.

b. Serving Personnel. Uncomplicated isolated attacks usually have no long term effect on employability although limitation of duty in the acute phase may be required.
Treatment is usually with topical steroid drops and mydriatics. Serving personnel require downgrading to E-3, MedLim 5002 'Unfit service outside base areas' unless they remain recurrence-free for a year. Additional limitations for associated systemic disease may also be required.

OH where the 10P is measured greater than 30 mmHg is associated with an increased risk of POAG and retinal vascular events.

18. Limitations. A diagnosis of POAG and OH with 10Ps greater than 30 mmHg requires treatment. Individuals with OH, or early POAG with very little field loss, require drug treatment (non-pupil-affecting topical drugs are used for aircrew e.g. Dorzolamide).

a. Recruits. Candidates with a history of OH or glaucoma are to be assessed P8.

b. Serving Personnel. Serving personnel with OH require regular screening including VF assessment by an ophthalmologist or optometrist. When stable a E-2 category MedLim 1300- 'Medical marker (no functional limitation)' is appropriate.

c. Aircrew. Serving aircrew with OH require regular screening including VF assessment by either an ophthalmologist or optometrist. Aircrew are fit unrestricted flying where the VF is deemed adequate but significant unilateral field loss in experienced aircrew would confer a monocular or uniocular grading (see link). All aircrew are to be assessed by DCA Ophth. Adrenaline and pilocarpine drops (pupil-affecting) are incompatible with flying duties. If surgery is indicated (trabeculectomy), the individual is to be downgraded E-3, MedLim 5002 'Unfit service outside base areas', until either fully recovered or stable and preferably off topical treatment. Thereafter, an E-2 MedLim 1300- 'Medical marker (no functional limitation)' category is appropriate, provided that the VF is satisfactory.

19. Personnel with a positive family history of glaucoma in a first degree relative have around a 10% chance of developing the disease and are to be screened by an ophthalmologist or optometrist annually from age 40 years[3].

CATARACT AND PSEUDOPHAKIA

20. Cataracts produce a number of symptoms, the most common being gradual painless loss of vision, glare (particularly from car headlights), and double vision. Treatment is surgical with cataract extraction and intraocular lens implant when cataract symptoms become visually significant.

a. Recruits. Candidates with a history of cataract are assessed P8.

b. Serving Personnel. The JMES of serving personnel is decided at the discretion of DCA Ophth. The decision depends on the degree and nature of visual loss from the cataract and whether the surgical management has been successful.

c. Aircrew. Aircrew who develop cataracts are to be assessed by the DCA Ophth. Successful cataract surgery need not be a bar to a return to unrestricted flying duties. Any cataract surgery in aircrew should be performed by a specialist with knowledge of aviation ophthalmology. Aircrew who undergo cataract surgery are to be subject to regular review throughout their flying careers.

or earlier if indicated

NEURO-OPHTHALMIC CONDITIONS

24. Limitations:

a. Recruits. Candidates with a history of paretic squint, optic neuritis or ophthalmic migraine are assessed P8.

b. Serving Personnel. Serving personnel are to be assessed according to residual disability.

c. Aircrew. Migraine is incompatible with solo flying and solo aircraft controlling duties (see Lflt 5-07), and assessment by a RAF neurologist is mandatory. Optic neuritis causes loss of vision and is incompatible with flying in the acute phase. After the DCA Ophth has confirmed full recovery and after underlying demyelinating disease has been excluded by the RAF neurologist; it may be possible to return the patient to flying duties.

STRABISMUS

25. Limitations:

a. Recruits. A past history of squint correction through surgery or patching is acceptable and is assessed on the basis of residual function. A persistent squint is acceptable for most ground branches and trades provided that VA is within limits. Amblyopia is acceptable within the limits detailed in the trade and branch selection sheets in AP 3391. Paralytic squints usually produce unacceptable diplopia and may be associated with other pathology, such candidates are to be assessed P8.

b. Serving Personnel including Aircrew. A past history of squint correction through surgery or patching is acceptable provided it is assessed on the basis of residual function. This also applies to aircrew candidates provided that all visual standards are met.

MONOCULAR AND UNIOCULAR VISION

26. Personnel with defective vision in one eye have varying degrees of reduced depth perception and restricted fields of vision. If the right eye is blind, the individual will be unable to fire the SA80 as the right eye must be used to sight the weapon, since sighting with the left eye might result in eye damage from the ejected cartridge. Monocular and uniocular personnel with defective vision in the right eye are therefore unfit firing the SA80 weapon. Monocular and uniocular personnel are also at significantly increased risk of visual incapacitation following other ocular injuries and are therefore also deemed unfit to work with lasers (see Lflt 3-04, Annex I). MOs should provide monocular and uniocular personnel with a FMed566 to allow provision of clear or prescription poly-carbonate eye wear. The use of protective eye wear should be mandated in work environments having an increased risk of blunt, penetrating or chemical trauma to the eye (including weapon firing for monocular and uniocular personnel with defective vision in their left eye). For similar reasons, the SP should be strongly encouraged to wear such eyewear for certain sports (e.g. squash). For the purposes of this publication, specific definitions are listed below:

a. Uniocular. When one eye is normal and the other eye is either absent or is blind.

irrespective of their branch or trade. The decision to provide an alternative personal weapon is an executive matter.

c. Aircrew.

(1)Uniocular vision. In favourable cases aircrew may be permitted to return to flying duties after successful rehabilitation with an A-3 grading, MedLim 2000'Unfit solo pilot - must fly with a pilot suitably qualified on type' subject to recommendation from the DCA Ophth, advice from CFMO (RAF) and RAF MB approval.

(2)Monocular vision. Aircrew are likely to be graded A-3, MedLim 2000 'Unfit solo pilot - must fly with a pilot suitably qualified on type' subject to recommendation from the DCA Ophth, advice from CFMO (RAF) and RAF MB approval.

CORRECTIVE FLYING SPECTACLES AND CONTACT LENSES

28. The provision of Corrective Flying Spectacles (CFS) and Contact Lenses (CL) for aircrew is detailed at Annex B. The provision of CL at MOD expense for non-aircrew personnel is detailed at Lflt 5-14 Annex C. Individuals who are entitled to wear contact lenses provided at public expense but are intolerant of wearing such lenses may be referred to the DCA Ophth for consideration of surgical treatment at public expense.

MANAGEMENT OF COMBAT LASER EYE DAMAGE

29. The medical management of combat laser eye damage in aircrew is detailed at Lflt 5- 14 Annex D.

OPHTHALMIC CONSIDERATIONS FOLLOWING AIRCRAFT EJECTION

30. MOs are to be aware of the likely injuries which may result from canopy disrupting mechanisms and air blast during ejection. The decision to refer an ejectee for examination by a Consultant Ophthalmologist should be determined on clinical grounds. Should the MO or civilian hospital find any clinical evidence that the eyes may have been injured; the individual is to be seen by a Consultant Ophthalmologist as soon as possible. The individual is not to return to flying until the MO has discussed the case with CFMO (RAF) and, where necessary, the DCA Ophth who will decide upon the need for further action. Where there is no clinical evidence that the eyes have been damaged, referral to an ophthalmologist is not required.

d. Muscle balance (cover tests and Maddox Wing/Rod for near and distance fixation).

e. Visual fields (Amsler grid and confrontation).

f. Stereopsis (TNO plates).

g. Fundoscopy (with mydriatic if indicated).

h. Slit lamp examination (if indicated).

i. Corneal topography (to exclude previous corneal surgery and ecstatic disease).

EXAMINATION METHOD

4. When conducting the standard ophthalmic examination the MO should ensure that the test area is appropriately illuminated and that the examination sequence reduces possible learning by the examinee. Results of testing should be accurately recorded.

5. Visual Acuity (Distant). VA for distance is assessed uniocularly with a backlit Snellen chart at exactly 6 metres or 3 metres with a mirror. The VA is recorded as the lowest line read without error. If glasses are worn, the test is repeated with glasses on (CFS for aircrew). If the VA is worse than 6/6 (with glasses if worn), it should be repeated looking through a pinhole to help differentiate between a refractive error and other causes.
If the VA cannot be corrected, binocular VA is also to be recorded. Care must be taken to ensure that the examinee cannot cheat by wearing contact lenses or learning the correct responses. Erroneous assessments will also occur if the examinee is allowed to screw up
their eyes or presses on the occluded eye during testing.

6. Visual Acuity (near and intermediate). Near VA is assessed with standard test types. The N5 'chart type' should be readable at 33 cm, the N14 chart test type should be readable at 100 cm. The power of accommodation should be measured objectively with the RAF near point rule when near visual acuity is reduced (glasses/CFS should be worn).
When near acuity is reduced accommodation should be assessed using the RAF rule.

7. Ocular Movements. Ocular movements should be assessed in all positions of gaze
and include convergence. The examinee is asked to report any diplopia. Defective convergence should be measured with the RAF near point rule, the objective convergence in cms from the rear edge of the slide is recorded. When looking for nystagmus, care should be taken to keep the fixation point within the normal binocular field of vision, i.e. not in extremes of gaze.

8. Pupil Reaction. Pupil reactions should be recorded for light and accommodation. Any irregularity of the pupil should be recorded.

9. External Inspection. Marked facial, orbital, eyelid and adnexal abnormalities or asymmetry will require documenting and specialist referral.

10. Visual Fields. The Amsler grid provides a quick method for detecting macular abnormalities and early changes in the central visual field and is useful in cases where there is reduced VA and a history of macular field defect such as laser eye injury. Aircrew should also have their peripheral fields checked at routine medical examinations using a

LEAFLET 5-14 ANNEX B: AIRCREW EYEWEAR

INTRODUCTION

1. Minor refractive errors are common and increase with advancing age (presbyopia). These errors are readily correctable but require special lenses and frames to minimise distortion, fogging, internal reflection, loss of visual field and integration problems with aircrew equipment assemblies (AEA). Particular problems are encountered when aircrew protective helmets are worn (loss of ear cup seal and interaction with oxygen mask), with CBRN protection (interaction with visor) and with night vision goggles.

2. Aircrew who require refractive correction to achieve the standards detailed in AP1269A Lflt 4-02, Annex A and B, aircrew who require correction to achieve a visual acuity (VA) of 6/6 in either eye, or aircrew who would benefit from minor correction to achieve a higher standard, may be prescribed Corrective Flying Spectacles (CFS), Aircrew
Respirator Spectacles (ARS), or Soft Contact Lenses (SCL) where suitable to their role. Aircrew may also elect to undertake Corneal Refractive Surgery (CRS) in accordance with
AP1269A Lflt 5-14 para 10, at their own expense.

CORRECTIVE FLYING EYEWEAR

3. The provision of corrective flying eyewear is funded through the Air Commodities Team DE&S. The contract identifies those medical officers authorised to act as demand authorities, specifies the eyewear and exclusions, identifies the Approved Optometry (AO) services and establishes the targets to be met.

4. Before flying with new eyewear, SMOs are to confirm that the correct prescription and type has been issued iaw the table below (e.g. FJ crew and student pilots on Texan/Tucano who will move onto FJ in due course), shall not wear varifocal lenses) and check its correct integration with AEA. The form at Appendix 2, confirming the aircrew's understanding of the need to carry spare CFS at all times when flying, is to be signed and scanned into their integrated health record (iHR).

	CFS (Corrective Flying Spectacles)				Soft Contact Lenses (SCLs)
Fast Jet and	Single vision	Bifocal	Trifocal	Varifocal (progressive)	
student pilots on Texan/ Tucano	Y	Y	NA	N	Y
Rotary	Y	Y	Y	Y	Y
Multi eng	Y	Y	Y	Y	Y
Single eng	Y	Y	NA	Y	Y

5. RPAS Operators who have previously been issued CFS may continue to use them until such time that new eyewear is required. Thereafter, the DSE route should be

LEAFLET 5-14 ANNEX B, APPENDIX 2: ACCEPTANCE OF CONDITIONS FOR THE USE OF CONTACT LENSES BY AIRCREW

Surname: Forenames:

Rank: Service Number:

I understand and accept that I am authorised to wear approved contact lenses only, provided through the Eyewear Process Plan while undertaking flying duties in accordance with the following conditions.

- The contact lenses are to be cleaned and disinfected appropriately, according to the instructions given by the makers of the cleaning solution. Advice on cleaning solutions is available from the issuing optometrist.

- My lenses are to be replaced by new lenses as advised by the optometrist. They are to be worn as daily wear lenses; they are not to be worn during sleep.

- Whenever I am wearing contact lenses whilst on duty, I am to carry a pair of clear Corrective Flying Spectacles to my current prescription.

- I am not to wear contact lenses when wearing an aircrew AR5 or other CBRN respirator.

- If either eye becomes red or painful I am to cease wearing contact lenses immediately and I am to report to a service medical officer within 24 hours. If this is impossible, I am to attend a primary care medical practitioner, an ophthalmic practitioner or a hospital casualty department within the same period.

- If flight is necessary within that period I am to wear my Corrective Flying Spectacles. Following such an incident, I am not to wear contact lenses under any

LEAFLET 5-14 ANNEX C: PROVISION OF CONTACT LENSES AT MOD EXPENSE FOR NON-AIRCREW PERSONNEL

1. There are a number of groups of Armed Forces personnel aside from aircrew, who, because of the nature of their employment, may be unable to perform their duty tasks satisfactorily wearing spectacles. This may either be due to the nature of the task, or, due to an incompatibility between spectacle wearers and their equipment.

2. Personnel listed below are entitled to the provision of contact lenses (CL) at MOD expense:

a. RM swimmer/canoeist.

b. Coxwains of rigid inflatable boats and Rigid Raiders.

c. Snipers.

d. Skidoo drivers.

e. Military Police on close protection duties.

f.RPAS Category III Reaper crew (RP/SO)

g. Clearance divers in the IED handling role.

h. Explosive Ordnance Device (EOD) personnel.

i. Kings Troop RHA and HCMR personnel employed on ceremonial duties.

j. Mountain Rescue personnel.

k. Personnel of the RAF Regiment employed on the Queens Colour Squadron (QCS).

l. SF Personnel (only if required for role and approved by SO1 Med HQ DSF).

m. Individuals who wear CLs for clinical reasons.

3. CLs are to be prescribed by a local CL practitioner and the cost of both lenses and solutions reimbursed from Resource Accounting Code (RAC) NHA 003. The use of daily wear disposable lenses should be encouraged as a safer and more practical alternative for personnel likely to find themselves in situations where lens hygiene and overnight storage are difficult. Individuals should only be referred to a Service Ophthalmologist if there is some concern by the prescribing CL practitioner as to the suitability of an applicant's eyes for CL wear.

a. Corneal Damage. Corneal damage may significantly degrade vision due to increased light scatter from opacities or due to gross rupture. In addition, iritis (intraocular inflammation), seen in association with corneal injuries, may cause photophobia, pain and miosis (small pupil).

b. Retinal Damage. In the case of retinal damage, the severity of visual loss will depend upon the proximity and extent of the damage to the fovea. The best visual acuity occurs in the foveola/fovea, and the acuity falls off sharply when moving toward the peripheral retina. Functionally, significant loss of vision usually occurs only if the burn directly affects the fovea. The expected minimum burn size (30-100 microns) for a low-power exposure to the fovea will have variable effects on visual acuity depending on location, with either no effect or a reduction in vision to approximately 6/12 for high-contrast targets. However, a direct laser burn to the foveola would definitely alter vision. If there is vitreous haemorrhage associated with the retinal damage the visual loss may be more profound as the blood may block the passage of light to uninjured portions of the retina.

c. Central visual field defects caused by damage to the posterior pole will be noticeable and may be distracting or disabling, depending upon whether the foveola is affected. These central defects can be detected and characterised quite accurately using an Amsler Grid. A laser's light energy is likely to affect both eyes, unless one is occluded or otherwise protected, because the laser beam's diameter, at operationally significant distances, will be wider than the inter-pupillary distance.

SYMPTOMS

6. Symptoms will vary depending upon the location and severity of injury. Patients may give a history of experiencing glare, flashblindness, decreased vision, pain or any combination of these. When seen by medical personnel, they may continue to complain of after-images, blurred vision, photophobia, pain or profound loss of vision. Obvious lesions, such as skin and corneal burns, and/or retinal burns and retinal haemorrhages make the diagnosis more certain, especially when accompanied by a history of seeing bright, coloured lights.

EXAMINATION

7. History. A full history should be ascertained using information contained at Lflt 5-14 Annex E, Appendix 1.

8. Initial Examination. All aircrew are at risk of laser exposure. It is therefore recommended that the Amsler Grid Test is included in the initial ophthalmic assessment of aircrew applicants, in order to document a baseline recording. It is also recommended that the Amsler Grid Test is performed when the aircrew member ceases to be employed in a laser risk environment as defined by risk assessment. By using these 'entry' and 'exit' tests a time frame of possible laser eye damage may be established which will assist in future evaluations such as compensation claims.

9. External Examination. The periocular tissue (lids and conjunctiva) and anterior segment (cornea, anterior chamber, and iris) of the eyes are evaluated on external examination. Laser injuries to the cornea will usually be limited to the area of the cornea within the palpebral fissure. Redness of the conjunctiva suggests ocular inflammation, possibly secondary to injury that may be external or internal. A small pupil in the inflamed eye suggests, but does not confirm, the diagnosis of intraocular inflammation (iritis). The

PHYSICAL FINDINGS

17. No clinical findings may be apparent, if only subjective symptoms (glare, flashblindness, or after-images) have occurred as the result of a non-damaging exposure, or if there is retinal damage or haemorrhage outside the fine vision area of the posterior pole. The latter may be asymptomatic and not seen with the direct ophthalmoscope. Malingerers will generally have either no objective findings, or symptoms out of proportion to objective findings. Clinical findings due to damage may be variable and include the following:

a. Isolated, rows, or groups of retinal burns.

b. Retinal/vitreal haemorrhages.

c. Superficial or deep burns of the skin and cornea.

TREATMENT

18. Corneal Injuries. The treatment for corneal burns is the same as for burns of other aetiologies, namely antibiotics and eye dressings. The principles regarding airway maintenance, smoke inhalation and facial burns must be followed, additionally:

a. Patch only the eye with the injured cornea. Do not use regular eye patches for such injuries, as these put pressure on the eye. The eye should be protected by a metal eye shield from any external pressure.

b. Any associated iritis and its attendant pain can be treated with mydriatics.

c. If the eye has been ruptured, the likelihood of saving it is low; do not put any
eye drops or ointments on a ruptured eye.

d. The patient should be kept physically quiet in a supine position.

e. The patient should be started on intravenous antibiotics, if possible.

f. Priority of evacuation depends on the severity of injury and the likelihood of saving the eye.

g. Pain medication may be required for patient comfort. Topical anaesthetics should never be given to the patient, but they may be used by the physician to aid in the examination and treatment of non-ruptured globes.

19. Retinal Injuries. At present, the treatment for laser injuries to the retina/choroid is not well-defined. Ocular and oral corticosteroids have not been proven effective for the treatment of retinal burns or haemorrhages. The use of eye patches for retinal damage is discouraged. Patching deprives the patient of his residual vision which may be quite good. It also has the effect of magnifying the visual impairment to the aircrew member and increasing his dependence on others. Personnel with vitreal haemorrhages should be maintained at bed rest with their heads positioned so that the blood settles away from the visual axis, particularly for the first few days. Delayed or tertiary treatment of vitreous haemorrhage consists of vitrectomy and associated procedures, but only for those eyes that do not have adequate spontaneous absorption of the blood.

c. Distraction. A light bright enough to disrupt attention.

SELF ASSESSMENT

5. Personnel can self-assess using the Amsler grid at Appendix 3. Use the grid under good lighting, wearing any spectacles normally used for reading. Hold the grid
at a normal reading distance (about 30 cm in front of your eyes). Cover one eye at a time with the palm of your hand and stare at the centre dot of the chart at all times. Do not let your eye drift from the centre dot; answer the following questions:

a. Can you see a dot in the centre of the grid?

b. While looking at the centre dot, can you see all four sides and corners of the grid?

c. While looking at the centre dot, do all of the lines appear straight with no distortions or blank or faded areas?

If you answered YES to all three questions then answer the following flowchart. If you answered NO to any of the above questions then you may wish to remove yourself from flying or controlling duties as soon as it is safe to do so and consult an eye specialist.

RESULTS

6. In some circumstances it may be possible to have retinal damage without obvious symptoms. The relevance of this is uncertain in the absence of abnormal visual signs (e.g. answering "yes" to all 3 Amsler Grid Questions) as it is unlikely to have an operational impact or be amenable to treatment. The following is designed to aid a pilot or controller in deciding whether or not an assessment should be sought with an optometrist or ophthalmologist after an exposure.

(Dated 16 Sep 20)

MEDICAL SELECTION PROCESS

INTRODUCTION

1. Medical Standards for entry into the Royal Air Force and its subsidiaries are promulgated in JSP 950 Leaflet 6-7-7 and AP1269A and are for interpretation by medically trained personnel. Candidates should be reminded that as recruiting staff are not medically trained, they are not to discuss medical conditions with them; advice and guidance should be sought from the Department of Occupational Medicine (DOM), Recruiting and Selection.

2. Applicants undergo intensive training, which is physically and mentally demanding. Candidates, who have a history of illness, recent surgery or have suffered ligament or bone injury, may not be accepted until the clinical issue is resolved. The candidate will require a medical examination to confirm their fitness and may be referred to the DOM for a specialist occupational opinion.

MEDICAL ELIGIBILITY

3. A candidate's eligibility for service may be affected by their previous medical or dental history, such as a degenerative condition, known susceptibility to injury or illness, or the requirement for regular medication; if there is any doubt then cases are to be referred for advice to the DOM.

a. The wearing of orthodontics (braces) is not a bar to entry. The wearing, and any required alteration or review, of these devices is a matter for the Trg pipeline owing to the time off it requires. The Recruiting Force (RF) is not to turn candidates away should the use of orthodontics be evident or highlighted by the candidate.

4. Pre-application enquiries. Candidates may write to the DOM to enquire about the significance of a particular condition. The DOM is to provide the candidate with guidance on their medical eligibility for recruitment.

5. Recruiting staff are to advise 'walk in' candidates, who declare a medical condition, to enquire to the DOM in writing enclosing any additional supporting medical information.

MEDICAL SCREENING LEAFLETS (MSL)

6. MSLs are issued automatically by the Defence Recruiting System on hand off of a candidate by the Virtual AFCO (VA) and is linked to the career interest and branch/trade. All candidates will complete the MSL even if they have nothing to declare. If a candidate has nothing to declare the current recruiter will receive a task within DRS informing them that an MSL has been completed with no further action required. If a candidate declares anything on the MSL the current recruiter will receive a task to inform them the MSL has been sent to the Department of Occupational Medicine (DOM). The MSL will be reviewed from the Request For Information (RFI) screen, however, the only personnel who will have access to view this information will be the DOM. All other users will receive a permission denied message when trying to access an MSL. After the MSL review by the DOM, the

one year of their appointment) when they attend their medical. Failure to do so will result in a candidate being deemed Temporarily Medically Unfit (TMU) until a report is provided.

11. Laser eye surgery. Medical fitness for candidates who have undergone laser eye surgery will be assessed in accordance with the standards detailed in the JSP950 6-7-7 by the ME.

PREVIOUS UK ARMED FORCES SERVICE

12. Re-entrant candidates. Re-entrant candidates are to be managed iaw AP3391 Vol 3 Lflt 207. If a re-entrant has been out of Service more than 3 years, they declare they have had cause to consult their GP or a Specialist Healthcare professional, or left their previous service on a lowered Joint Medical Employment Standard (JMES) then they will require a full
Level 4 Medical Risk Assessment. In these circumstances previous military medical records
must be obtained for review by the contracted medical authority. AP3391 Vol 3 Lflt 207 Annex L Para 2 details the procedure for obtaining past military medical records for Regular and Reserve candidates. Upon receipt these are to be forwarded to the following address;

Capita Defence Recruitment Medicals
Knights Court – Unit 6190
Solihull Parkway,
Birmingham Business Park
Birmingham
B37 7YB

Note: A candidates medical account must be created by the MFBC/Sqn Recruiters on the contracted medical authorities' portal prior to them receiving previous military medical records. Failure to ensure this will result in the documents being returned to the originator without action.

13. Currently serving personnel. Candidates for commissioning, who are currently serving, will have their suitability for further training and extension/alteration of terms & conditions of service assessed by their local Joint Healthcare Facility (Medical Centre) under the authority of their SMO utilising Form 7153b (Rev 9/19) – In-Service Commission Declaration.

14. Reserve Candidates with Previous Service. Reserve applicants medical process is managed iaw re-entrant policy (Para 12), including obtainment of previous military medical
records.

a. University Air Sqn (UAS) or Single Service Equivalent Medical

1) If the candidate has had a UAS / University Officer Training Corps (UOTC) medical within 3 years then Recruiting personnel are to inform the Medical and Fitness Booking Cell (MFBC) HQ R&S. The MFBC will ask the Authorised Medical Contractors to change the candidates UAS Unique Reference Number (URN) to the new Defence Recruiting System (DRS) URN.

2) As the Authorised Medical Contractors dispose of all medical records after 3 years there is no requirement for Recruiting personnel to request 'On Joining' medical records for those applying after this time. Only if the candidate has

a. When under the age of 16. It is the responsibility of the candidate and/or parent/guardian to provide a suitable chaperone.

b. Whenever the candidate or ME feel that it is appropriate; the responsibility for organising this lies with whoever deems a chaperone necessary.

Candidates should be advised that if it is their preference then they must provide their own chaperone in accordance with General Medical Council (GMC) guidelines: Intimate Examinations and Guidelines (2013). All candidates should be made aware that if they elect to have a chaperone and one is not available the medical examination will not be performed.

22. Body Mass Index. Recommended BMI limits can be found at Annex B. If only marginally above the upper threshold of 30.0, but below 32.0 a candidate will be deemed TMU and afforded 3 months to lose the required weight. If they fail to contact the authorised medical contractor with signed GP evidence detailing an acceptable BMI within this time, then they will be deemed Medically Unfit (MU) BMI. If a candidate is found to have a BMI greater than 32.0 then they will automatically be deemed MU BMI. In either process once deemed MU BMI the candidate is then to be issued with DRS Letter C-RAF- 0015 (BMI Fail and Return within 12 Months of Initial Medical). A journal entry to reflect this is to be entered when closing the case. However, the candidate will then have up to 12 months after the date of the initial medical, during which time their case can be re-opened by the AFCO should they have reached the required BMI standard. If the candidate returns within the 12-month time frame, the AFCO is to advise them to provide signed GP evidence detailing an acceptable BMI to the DOM iaw DRS Letter C-RAF-0015.

23. Candidates below the minimum BMI standards are to be graded as Medically Unfit (MU) due to the excess risk of stress fractures and fatigue during Phase 1 training. BMI must be greater than 17 if the candidate is under the age of 18, or a BMI greater than 18 if the candidate is over the age of 18. Should a candidate turn 18 years of age during this time then the BMI standards for over 18's applies for the entire 6-month period.
These candidates do not require a limited face to face medical with the authorised medical
contractor, they can submit a signed and stamped report from the GP or Practice Nurse to
the DOM and formally appeal the MU status as they believe they now meet the required standard.

24. Colour perception. Candidates who pass the Ishihara Test are graded CP2 those who fail the test are graded CP4. If a candidate disputes the result then they are, in the
first instance, to be offered a repeat test with the authorised medical contractor. Should they decline then they can be offered the opportunity to attend the DOM. The DOM offers a computer-based colour perception test which will provide a definitive result. If they wish
to attend the DOM •lease contact our rece•tion staff using the following email address;
Section 40 T&S will not be covered by the DOM
and is to be sought from the relevant CoC.

ADMINISTRATION AFTER THE MEDICAL

25. MFBC/Sqn Recruiters are to use the authorised medical contractors' online portal to confirm the medical status of each candidate after their medical; the information should be available within two working days of a clinics completion and will classify the candidate as:

a. Fit.

c. 4 weeks after the appointment, (only applicable if GP information has been requested) check the authorised medical contractor's online portal, if GP information has not been uploaded, send a hastener to the GP Surgery. Create a note on DRS showing that the action had been taken.

d. 6 weeks after the appointment if the medical issue is still unresolved and/or GP information is still outstanding send C-RAF-0019 TMU Referral Hastener to candidate. Letter advises the candidate that further progress cannot be made with their case until the medical issue has been resolved. Regular candidates will be advised that should the TMU problem not be resolved within 3 Months their case may be closed. Create a note on DRS showing that the action had been taken.

e. 9 weeks after the appointment if the medical is still unresolved and/or GP information is still outstanding send C-RAF-0020 Referral Final Hastener. Letter advises candidate that their case will be closed should they not contact the AFCO or MFBC within 21 days of the receipt of the letter. Create a note on DRS showing that the action had been taken.

f. 12 weeks after the appointment if the medical is still unresolved and/or GP information is still outstanding and no response has been received to the hastener letters the case is to be returned to the AFCO. Create a note on DRS showing that the action had been taken and task the case back to the AFCO.

g. Once GP information has been received and/or medical issue has been resolved TMU candidates are to be reviewed by an ME of the authorised medical contractor, by means of either a Limited Medical or an administrative paper review.

33. TMU (more than 3 Months). MFBC/Sqn Recruiters are to issue candidates with C- RAF-0025 TMU Over 3 Months, advising candidate to notify the AFCO / Sqn Recruiters once they are ready to return.

34. Medically Unfit (MU). The ME is contracted to explain to the candidate why they have been found unfit, this is to be substantiated in a letter from the authorised medical contractor. The AFCO/Sqn Recruiter are to close down the case on DRS.

35. Candidates who are unfit for their chosen branch or trade. The ME will annotate on the Candidate Medical Examination Result (CMER) whether a candidate is Fit general service but MU for their chosen branch or trade. The MFBC/S•n Recruiters are to submit an email request to the DOM (Section 40) to ascertain which trades/branches a candidate is fit for. The candidate will not need to undergo a further medical for the choices annotated as long as the original medical is in date for entry to the planned Phase 1 training course.

36. Executive Waiver of the medical entry standard. Recruiters are to refer to the guidance given in AP3391 Vol 3 Lflt 209 for Officer and OR candidates and Vol 5 Lflt 217 for RAFR candidates.

37. Change of Medical Circumstances Pro Forma. On confirmation of a candidate's medical fitness recruiters are to issue candidates with a change in medical circumstances pro forma (DRS letter C-RAF-0074). Recruiters are to instruct candidates to complete and return this to the DOM should they suffer illness or injury or receive medical treatment at

SFAS PAYMENT PROFORMA

PLEASE DEBIT THE: Smithy's 201041

1 = Officers' Mess 2 = Sergeants' Mess 3 = JRWF 4 = Banked Funds

AS DETAILED BELOW

ACCT CODE	DEPT	DATE	DETAILS	£	P	TC
201041		18-Aug	Payment of Music Licence Invoice No SIN1761224	1,155	10	

BY ELECTRONIC BANKING/SFCC TO: PPLPRS - SIN1761224

THE SUM OF One Thousand Pound, One Hundred and Fifty Five Pounds and Ten Pence Onl (AMOUNT IN WORDS)

IN RESPECT OF THE FOLLOWING GOODS: Payment of Music Licence

Sort Code: 20-18-98 Account Number: 33835170

Account Flt Only

Signature of Authorising Officer for Fund: *J Dixon (Electronically Signed,*

Signature Authorising Electronic Banking Payment

Name in Block Capitals JAMIE DIXON

Name in Block Capitals

Position Within Funds: Treasurer

Position Within Accounts Department