# Description of the proposed General Directions: Impaired Colour Vision.

This introductory information is not part of the proposed General Directions (GD) proper but is intended as support and explanation to assist with the public consultation process of that GD. The proposed GD itself is those pages with "Proposed Impaired Colour Vision GD" in the page footer.

### Contents of this GD

This proposed GD (*Impaired Colour Vision*) is a revision of the similarly named draft GD that underwent public consultation during 2004, 2006, and 2009. The purpose of the revision is to incorporate previous consultation feedback and to update the provisions of the proposed general directions. Changes from the previous versions of this draft GD, are:

- The use of the standard (H53.5 ICD-10) term Colour Vision Deficiency where appropriate;
- Simplification of the screening and workup of applicants with impaired colour vision;
- Inclusion of an option for restricted certification in the absence of further colour vision testing;
- Revision of the conditions applied to those Colour Vision Deficient applicants who are issued restricted medical certificates – removal of the proposed "NZ airspace only" condition and updating of terminology (formerly *air transport operations* and *special operations*);
- Inclusion of an 'or otherwise as acceptable to Director' secondary screening option for all Colour Vision Deficient applicants, to provide a degree of future-proofing, accommodate the planned use of the CAD test (via AC67-1), and provide for the likely future phasing out of Farnsworth Lantern based options;
- A similar approach to screening and workup of applicants with impaired colour vision is applied for each of the three classes of medical certificate. This has allowed the "Decision flow-diagram" for each class to be incorporated into a single flow-diagram.

#### Other material

Also included in this consultation bundle are:

- An introductory section titled "Proposed Impaired colour Vision GD" containing explanatory material. The pages of this section have "Description of the proposed Impaired Colour Vision GD" in the page footer.
- Proposed consequential amendments to other General Directions The Examination procedures GD. The pages of this section have "Proposed consequential amendments to other documents" in the page footer.

- Proposed consequential amendments to CAA Advisory Circular AC67-1. The pages of this section have "Proposed consequential amendments to other documents" in the page footer.
- A schematic flow diagram intended as an aid in support of the proposed Impaired Colour Vision GD. This flow diagram is not a part of the GD itself but is enclosed to provide additional guidance and information. The pages of this section have "Flow diagrams for proposed Impaired Colour Vision GD" in the page footer.

#### How this GD works as an element of the medical certification system

Section 27G of the Civil Aviation Act 1990 provides for the Director to issue general directions in relation to (a) "conducting examination of applicants and licence holders, and reporting the results of those examinations to the Director" and (c) "specifying the requirements of examinations or other clinical matters, which must be reasonable, including, but not limited to, - (i) the medical content of examinations; (ii) the interpretation and analysis of results of examinations; (iii) the significance of results of examinations for the purpose of determining whether or not an applicant is eligible for a medical certificate under section 27B."

Rule 67.3, from Rule Part 67 Medical Standards and Certification, includes the definition of the term 'aeromedical significance': "A medical condition is of aeromedical significance if, having regard to any relevant general direction, in interferes or is likely to interfere with the safe exercise of the privileges or the safe performance of the duties to which the relevant medical certificate relates".

Most of the medical standards in Rule Part 67 Medical Standards and Certification (67.103, 67.105, and 67.107) refer, directly or indirectly, to a requirement that an applicant have no medical condition that is of aeromedical significance.

This statutory construct allows for general directions (GDs) to be used to describe requirements relating to the 'examinations and other clinical matters' necessary for determining whether an applicant is eligible for the issue of a medical certificate. The Part 67 reference, in the medical standards, to the GDs also allows GDs to be used to define how such 'examinations and other clinical matters' can be interpreted (etc) for the purpose of determining whether an applicant meets the medical standards published in the Rules.

This particular GD describes the requirements for the medical certification of applicants who are colour vision deficient. This GD specifies several options for the medical certification of such applicants, and the certification outcomes that apply to each of those options.

With one exception this GD is no different to the colour vision certification policy that has been in operation at CAA for some years. By formalising this policy as a GD the administrative processing of most colour vision deficient applicants will reside under s27B(1) of the Act and, as such, will be able to be undertaken directly by a delegated Medical Examiner rather than requiring direct CAA involvement and an 'AMC' (Accredited Medical Conclusion and the application of statutory flexibility under s27B(2) of the Act.

The one departure from current CAA policy is the introduction of the City of London (CAD) colour vision test as a secondary screening option. It is likely that the introduction of the CAD alternative will allow, in time, the Farnsworth Lantern (FALANT) secondary screening option to be dropped entirely.

## Civil Aviation (Impaired Colour Vision) General Directions Notice 2013

Pursuant to section 27G of the Civil Aviation Act 1990, the Director, after having consulted the persons, health professionals with aviation medical experience, representative groups within the aviation industry or elsewhere, government departments, and Crown agencies that the Director considers appropriate, gives the following notice.

#### Contents

#### [INSERT CONTENTS SECTION HERE]

#### **General Directions**

#### 1. Title

These general directions are the Civil Aviation (Impaired Colour Vision) General Directions 2013

#### 2. Commencement

These general directions come into force on [DATE].

#### 3. Purpose

The purpose of these general directions is to specify the requirements for examinations or other clinical matters, for applicants who have, or may have, any colour vision deficiency, including, but not limited to,—

- (a) the medical content of examinations:
- (b) the interpretation and analysis of results of examinations:
- (c) the significance of results of examinations for the purpose of determining whether or not an applicant is eligible for a medical certificate under section 27B of the Act.

#### 4. Interpretation

(1) In these general directions, unless the context otherwise requires,—

Act means the Civil Aviation Act 1990

**applicant** means, depending on context, either an applicant for a class 1 medical certificate, or an applicant for a class 2 medical certificate, or an applicant for a class 3 medical certificate

**impaired colour vision**, in relation to an applicant, means a colour vision deficiency (or deficit of colour vision) that results in the applicant —

failing the colour vision screening examination (Ishihara).

(2) A term or expression that is defined in the Act, the rules, or the Civil Aviation (Examination Procedures) General Directions Notice and used, but not defined, in these general directions has the same meaning as in the Act, the rules, or the Civil Aviation (Examination Procedures) General Directions Notice, as the case may require.

#### 5. Status of examples and notes

- (1) An example or note used in this notice is only illustrative of the provision to which it relates. It does not limit the provision.
- (2) If an example, or a note, and the provisions to which it relates are inconsistent, the provision prevails.

#### Part 1 Class 1, 2, and 3 medical certificates

#### Subpart 1 - Impaired colour vision

#### 6. Interpretation of discrepant results

- (1) If there is a significant discrepancy between the results of a recent vision examination and any past colour vision examinations then the medical examiner should resolve the discrepancy by either
  - (a) Consulting the applicant's CAA medical file to assist in determining which results should be relied upon; or
  - (b) Seeking further colour vision examination to assist in determining which results should be relied upon.
- (2) If the medical examiner is unable to resolve the discrepancy between the results of colour vision examinations then the medical examiner should—
  - (a) Conclude that the applicant's colour vision deficiency is of aeromedical significance and consider the application of statutory flexibility (refer sections 27B(2) and (3) of the Act).

# 7. Screening an applicant with a colour vision deficiency that has become apparent since applicant's last colour vision screening examination (Ishihara)

- (1) If, since the applicant's last colour vision screening examination (Ishihara), an applicant's medical condition has changed in any way that suggests the presence of a colour vision deficiency that may be of aeromedical significance, then the medical examiner
  - (a) Must consider the results of a colour vision screening examination (Ishihara) undertaken since the change in the applicant's medical condition.

#### Note

It is relatively rare for colour vision status to change. However medical conditions such as diabetic (or other) retinopathy, the use of some medications, or the implantation of intraocular lenses can lead to a change in colour vision status.

- (2) Subclause (1) applies despite anything to the contrary in the—
  - (a) Civil Aviation (Timing for Routine Examinations) General Directions Notice; or
  - (b) Civil Aviation (Examination Procedures) General Directions Notice.

# 8. Relevant colour vision screening examination (Ishihara) results to interpret and analyse

For the purpose of these general directions the determination of whether an applicant has impaired colour vision relies on the interpretation and analysis of the results of a colour vision screening examination (Ishihara) undertaken by the applicant. The medical examiner must consider the most recent colour vision screening examination (Ishihara), but should not ignore or discount any previous colour vision examinations undertaken by the applicant.

#### 9. Relevant non-routine examination results to interpret and analyse

If an applicant has impaired colour vision, the medical examiner must either assess the applicant as described in section 10(3), or analyse and interpret the results from the most recent —

- (a) Holmes-Wright lantern colour vision test (refer *Examination Procedures* GD for test details) undertaken by the applicant; or
- (b) Farnsworth lantern (FALANT) colour vision test and Anomaloscope (Nagel or Neitz) colour vision test (refer *Examination Procedures* GD for test details) undertaken by the applicant; or
- (c) Other equivalent colour vision test acceptable to the Director (refer CAA Advisory Circular AC 67-1).

#### Note

The Holmes-Wright lantern Type A or Type B is acceptable for performance of the Holmes-Wright lantern colour vision test.

#### **10.** Significance of examination results

- (1) If the applicant has impaired colour vision and:
  - (a) Passes the Holmes-Wright lantern colour vision test; or
  - (b) Passes the Farnsworth lantern (FALANT) colour vision test and has no result indicating a colour vision deficiency that is either protanopic or protanomalous in nature; or
  - (c) Passes another equivalent colour vision test acceptable to the Director (refer CAA Advisory Circular AC 67-1),

the medical examiner may assess the applicant as having a colour vision deficiency that is not of aeromedical significance.

- (2) If the applicant has impaired colour vision and:
  - (a) Fails the Holmes-Wright lantern colour vision test; or
  - (b) Fails the Farnsworth lantern (FALANT) colour vision test; or
  - (c) Passes the Farnsworth lantern (FALANT) colour vision test and has any result indicating a colour vision deficiency that is either protanopic or protanomalous in nature; or
  - (d) Fails another equivalent colour vision test acceptable to the Director (refer CAA Advisory Circular AC 67-1),

the medical examiner must assess the applicant as described below in section 10(3).

- (3) An applicant who either:
  - (a) Does not undertake the further colour vision testing described above in section 9(a) or 9(b); or
  - (b) Fails the further colour vision testing as described above in section 10(2);

must be assessed as follows —

#### Class 1

(c) assess the applicant for a class 1 medical certificate as having a colour vision deficiency that is of aeromedical significance, or

- (d) assess the applicant for a class 1 medical certificate as having a colour vision deficiency that is not of aeromedical significance only if the medical certificate that is issued is endorsed with the following restrictions
  - (i) Not valid for air operations carrying passengers; and
  - (ii) Not valid for night flying; and
  - (iii) Not valid for flight under Instrument Flight Rules; and
  - (iv) Not valid for flight in the vicinity of a controlled aerodrome unless the aircraft is in radio contact with aerodrome control; and

#### Class 2

- (e) assess the applicant for a class 2 medical certificate as having a colour vision deficiency that is of aeromedical significance, or
- (f) assess the applicant for a class 2 medical certificate as having a colour vision deficiency that is not of aeromedical significance only if the medical certificate that is issued is endorsed with the following restrictions
  - (i) Not valid for night flying; and
  - (ii) Not valid for flight under Instrument Flight Rules; and
  - (iii) Not valid for flight in the vicinity of a controlled aerodrome unless the aircraft is in radio contact with aerodrome control; and

#### Class 3

(g) assess the applicant for a class 3 medical certificate as having a colour vision deficiency that is of aeromedical significance.

#### Subpart 2 - Information required for AMC

#### 11. Information to be made available for AMC

If the medical examiner assesses the applicant as not meeting the medical standard prescribed in rule 67.103(m)(5), 67.105(m)(5), or 67.107(m)(5) of the rules and the medical examiner elects to consider the application further under the flexibility provisions of section 27B of the Act, the medical examiner:

- (a) must ensure that the results of all of the colour vision examinations considered by the medical examiner are made available for the purposes of reaching an accredited medical conclusion (AMC);
- (b) should consider providing the results of the following, or other similar, additional colour vision tests undertaken by the applicant are made available for the purposes of reaching an accredited medical conclusion (AMC);

- (i) Holmes-Wright lantern colour vision test; and
- (ii) Farnsworth lantern (FALANT) colour vision test and anomaloscope (Nagel or Neitz) colour vision test.

#### Note

Detailed information concerning the various colour vision tests mentioned above can be found in the Civil Aviation (Examination Procedures) General Directions Notice.

## **Consequential amendments to other General Directions**

#### **Civil Aviation (Examination Procedures) General Directions Notice**

The following provisions are intended for insertion into:

- (1) Part 1 Purpose and interpretation, Section 5, of the of the Civil Aviation (Examination Procedures) General Directions Notice.
- (2) Part 2, Schedules 1 and 13, of the Civil Aviation (Examination Procedures) General Directions Notice.

The following provisions are intended for insertion into the Civil Aviation (Examination Procedures) General Directions Notice.

#### Part 1 Purpose and interpretation

Replace section 5 of Part 1 with the following text.

#### 5 Applicant proof of identity

- (1) For the purpose of the routine examinations and non-routine examinations described by these General Directions, and where an applicant is required to produce evidence of his or her identity, the following photographic identity documents are acceptable for that purpose:
  - (a) a current New Zealand passport;
  - (b) a current New Zealand driver licence;
  - (c) a current photographic identity card issued by the New Zealand Defence Force, New Zealand Police or the New Zealand Fire Service;
  - (d) a current CAA Airport Identity Card;
  - (e) a valid and current passport or national identity document issued by another country.
- (2) An equivalent alternative form of photographic identification, not listed above, may also be acceptable to the Director (Refer AC 67-1).

#### Part 2 Examination procedures

#### Schedule 1 Routine examinations

#### Section 11: Colour vision screening examination (Ishihara)

Replace section 11 of Schedule 1 with the following text.

#### 11.1 Definition

- 11.1.1 The Colour vision screening examination (Ishihara) is a screening examination of colour vision function.
- 11.1.2 The Colour vision screening examination (Ishihara) employs the Ishihara pseudoisochromatic plate set. A variety of plate sets may be used: 14 or 16 –plate edition; 24 or 26 -plate edition; 32 or 36 or 38 –plate edition. Each plate set comprises:
  - (a) An introductory numerical plate that both normal and colour defective individuals are able to read;

- (b) A number of adult test plates that require the reader to identify a numeral from amongst the differently coloured and sized circles;
- (c) A number of plates where the reader is asked to trace a winding line, between two points, from amongst the differently coloured and sized circles.
- 11.1.3 There are different pass-fail criteria for the different plate sets.

#### **11.2** Conduct of examination

- 11.2.1 An applicant who undertakes a Colour vision screening examination (Ishihara) must produce evidence of their identity as outlined in Part 1, paragraph 5 (Applicant proof of identity) of these General Directions.
- 11.2.2 A medical examiner must ensure that the colour vision screening examination (Ishihara) is conducted in accordance with
  - (a) the manufacturer's instructions for the Ishihara plate set used; or
  - (b) any other equivalent published standard that is acceptable to the Director.
- 11.2.3 Unless specified otherwise in the manufacturer's instructions the medical examiner must ensure that the colour vision screening examination (Ishihara) is conducted
  - (a) In daylight conditions or under illuminate D65 conditions (as provided by a Philips 96 fluorescent tube light);
  - (b) With each plate presented perpendicular to the applicant's line of sight, and at a distance of greater than 75 cm from the applicant's eyes (beyond the applicant's fingertips);
  - (c) With the plates presented to the applicant in random order.
- 11.2.4 The medical examiner must test the applicant with all of the adult numerical test plates contained within the plate set used.

#### **11.3** Interpretation of results

- 11.3.1 The results of the colour vision screening examination (Ishihara) are interpreted as a pass when:
  - (a) the applicant makes no errors on the adult numerical test plates of a 14 or 16 -plate Ishihara plate set.
  - (b) the applicant makes 2 or less errors on the adult numerical test plates of a 24 or 26 –plate Ishihara plate set.
  - (c) the applicant makes 3 or less errors on the adult numerical test plates of a 32 or 36 or 38 –plate Ishihara plate set.

#### Note

For the post-1980 versions of the 24-plate Ishihara test the adult numerical test plates are plates number 2 - 15, and plate number 1 is the introductory or demonstration numerical plate.

11.3.2 Otherwise the results of the colour vision screening examination (Ishihara) are interpreted as a fail.

#### **11.4 Reporting requirements**

- 11.4.1 The medical examiner must ensure that any plate numbers that the applicant has identified incorrectly are recorded in the appropriate place in the report required under section 27D of the Act (form CAA 24067/002).
- 11.4.2 The document produced by an applicant as evidence of his or her identity must be recorded on the report that under section 27D(1) of the Act records the results of the colour vision screening examination (Ishihara).

#### **11.5 Period of validity of results**

11.5.1 The results of a colour vision screening examination (Ishihara) are valid for a period of one year from the date of the examination.

#### Schedule 13 Non-routine examinations: Vision

Replace the contents of Schedule 13 with the following text.

#### Section 1: Anomaloscope (Nagel or Neitz) colour vision test

#### 3.1 Definition

- 3.1.1 The Anomaloscope (Nagel or Neitz) colour vision test is an examination of colour vision function.
- 3.1.2 These are colour matching tests that require the subject to adjust the amount of red and green light required to match a static yellow light. Anomaloscopes are the gold standard for diagnosis of protan and deutan colour vision deficiencies.

#### **3.2** Conduct of examination

- 3.2.1 An applicant who undertakes an anomaloscope (Nagel or Neitz) colour vision test must produce evidence of their identity as outlined in Part 1, paragraph 5 (Applicant proof of identity) of these General Directions.
- 3.2.2 A medical examiner must ensure that the anomaloscope (Nagel or Neitz) colour vision test is conducted in accordance with
  - (a) the manufacturer's instructions for the anomaloscope (Nagel or Neitz) colour vision test; or
  - (b) any other equivalent published standard that is acceptable to the Director.

#### **3.3** Interpretation of results

3.3.1 There are no pass or fail criteria for interpretation of the results of an anomaloscope (Nagel or Neitz) colour vision test. The results of the anomaloscope (Nagel or Neitz) colour vision test are to be interpreted as to the nature (*protan* or *deutan* etc) and severity of the subject's colour vision deficiency.

#### **3.4** Reporting requirements

3.4.1 The results of the anomaloscope (Nagel or Neitz) colour vision test must be reported in a manner that clearly indicates the severity and nature (e.g. +3 deutan) of the subject's colour vision deficiency.

#### **3.5** Period of validity of results

3.5.1 The results of an anomaloscope (Nagel or Neitz) colour vision test are valid for an indefinite period unless there is any clinical suggestion that the applicant's colour vision deficiency may have changed.

#### Section 2: Farnsworth lantern (FALANT) colour vision test

#### 6.1 **Definition**

- 6.1.1 The Farnsworth lantern (FALANT) colour vision test is an examination of colour vision function.
- 6.1.2 The Farnsworth lantern (FALANT) colour vision test is a two-light colour naming test employing red, green, and white lamps. The subject is asked to identify the colour of each of the two lights (using only the colour names "red", "green", and "white") as they are presented.

#### Note

The use of the Stereo Optical OPTEC 900 lantern is an acceptable alternative to the Farnsworth lantern for the purposes of the Farnsworth lantern (FALANT) colour vision test.

#### 6.2 Conduct of examination

- 6.2.1 An applicant who undertakes a Farnsworth lantern (FALANT) colour vision test must produce evidence of their identity as outlined in Part 1, paragraph 5 (Applicant proof of identity) of these General Directions.
- 6.2.2 A medical examiner must ensure that a Farnsworth lantern (FALANT) colour vision test is conducted in accordance with
  - (a) the manufacturer's instructions for the Farnsworth lantern (FALANT) colour vision test device; or
  - (b) any other equivalent published standard that is acceptable to the Director.

#### 6.3 Interpretation of results

- 6.3.1 An error is recorded in the Farnsworth lantern (FALANT) colour vision test if there is a mistake in naming either or both of the colours in the pair that is presented. A second and third run of nine presentation is only required if the subject makes one or more errors on the initial run. The average error score is the mean of the error scores made during the second and third run of nine presentations.
- 6.3.2 The results of the Farnsworth lantern (FALANT) colour vision test are interpreted as a pass if:
  - (a) there are no errors during the initial run of nine presentations; or
  - (b) there are errors during the initial run of nine presentations, and there is an average error score of 1.0 or less during the second and third run of nine presentations.
- 6.3.3 Otherwise the results of the Farnsworth lantern (FALANT) colour vision test are interpreted as a fail.

#### 6.4 **Reporting requirements**

6.4.1 The results of the Farnsworth lantern (FALANT) colour vision test must be reported in a manner that clearly indicates whether the subject passed or failed the test. The results should also specify the nature and number of any errors made.

#### 6.5 **Period of validity of results**

6.5.1 The results of a Farnsworth lantern (FALANT) colour vision test are valid for an indefinite period unless there is any clinical suggestion that the applicant's colour vision deficiency may have changed.

#### Section 3: Holmes-Wright lantern colour vision test

#### 7.1 Definition

- 7.1.1 The Holmes-Wright lantern colour vision test is an examination of colour vision function.
- 7.1.2 The Holmes-Wright lantern colour vision test is either a two-light or three-light colour naming test employing red, green, and white lamps. The subject is asked to identify the colour of each of the lights (using only the colour names "red", "green", and "white") as they are presented.

#### Note

The Holmes-Wright lantern Type A or Type B is acceptable for performance of the Holmes-Wright lantern colour vision test.

#### 7.2 Conduct of examination

- 7.2.1 An applicant who undertakes a Holmes-Wright lantern colour vision test must produce evidence of their identity as outlined in Part 1, paragraph 5 (Applicant proof of identity) of these General Directions.
- 7.2.2 A medical examiner must ensure that a Holmes-Wright lantern colour vision test is conducted in accordance with
  - (a) the manufacturer's instructions for the Holmes-Wright lantern colour vision test device; or
  - (b) any other equivalent published standard that is acceptable to the Director.

#### 7.3 Interpretation of results

- 7.3.1 An error is recorded in the Holmes-Wright lantern colour vision test if there is a mistake in naming any of the colours that is presented. A second run of nine presentation is only required if the subject makes one or more errors on the initial run.
- 7.3.2 The results of the Holmes-Wright lantern colour vision test are interpreted as a pass if:
  - (a) there are no errors during the initial run of nine presentations; or
  - (b) there are errors during the initial run of nine presentations, and there are no errors during the second run of nine presentations.
- 7.3.3 Otherwise the results of the Holmes-Wright lantern colour vision test are interpreted as a fail.

#### 7.4 **Reporting requirements**

7.4.1 The results of the Holmes-Wright lantern colour vision test must be reported in a manner that clearly indicates whether the subject passed or failed the test. The results should also specify the nature and number of any errors made.

#### 7.5 **Period of validity of results**

7.5.1 The results of a Holmes-Wright lantern colour vision test are valid for an indefinite period unless there is any clinical suggestion that the applicant's colour vision deficiency may have changed.

#### Section 4: Colour Assessment and Diagnosis (CAD) (City of London) colour vision test

#### 8.1 Definition

- 8.1.1 The *Colour Assessment and Diagnosis* (CAD)(City of London) colour vision test is an examination of colour vision function that provides detailed assessment of red / green and yellow / blue colour perception.
- 8.1.2 The CAD test isolates the use of colour signals and requires the applicant to report the direction of moving colour-defined pattern displayed on a calibrated visual screen. The moving test pattern changes randomly in colour, saturation and motion direction. The test cannot be learnt.

#### 8.2 Conduct of examination

- 8.2.1 An applicant who undertakes a CAD colour vision test must produce evidence of their identity as outlined in Part 1, paragraph 5 (Applicant proof of identity) of these General Directions.
- 8.2.2 A medical examiner must ensure that a CAD colour vision test is conducted in accordance with
  - (a) the manufacturer's instructions for the CAD colour vision test device; or
  - (b) any other equivalent published standard that is acceptable to the Director.
- 8.2.3 The CAD test may be undertaken including any of the options and settings available (e.g. 'screen', 'environment', or 'certification'), but must include the Full (Definitive) option which identifies the class of colour vision involved (i.e., normal trichromacy, deutan or protan-like deficiency or acquired deficiency) and quantifies the severity of red / green and yellow / blue loss.
- 8.2.4 If the RG threshold result falls in the range of 4.8 7.2SN (inclusive) for deutan deficiency and 9.6 14.4SN (inclusive) for protan deficiency, then the definitive CAD test must be repeated three more times. This option is offered automatically by the program. If the RG threshold result is outside those ranges no repeats are necessary.

#### 8.3 Interpretation of results

- 8.3.2 The results of the definitive CAD colour vision test are interpreted as a pass if and only if:
  - (a) the final 'definitive' result is less than 6SN (Standard Normal CAD units) for a deutan type defect; or
  - (b) the final 'definitive' result is less than 12SN (Standard Normal CAD units) for a protan type defect.
- 8.3.3 Otherwise the results of the CAD colour vision test are interpreted as a fail.

#### 8.4 **Reporting requirements**

8.4.1 The results of the CAD colour vision test must be reported in a manner that clearly indicates whether the subject passed or failed the test. The results should also specify the number of test runs performed in the event that repeats were undertaken.

#### 8.5 **Period of validity of results**

8.5.1 The results of a CAD colour vision test are valid for an indefinite period unless there is any suggestion that the applicant's colour vision deficiency may have changed, or the results of the CAD test may be otherwise invalid.

# **Consequential amendments to other Documents**

### **Civil Aviation Advisory Circular AC 67-1**

The following provisions are intended for insertion into:

(1) Subpart B, Medical certification, of the Civil Aviation Advisory Circular AC 67-1.

#### Subpart B – Medical certification

#### **General Directions – Impaired Colour Vision**

#### Part 1 - Class 1, 2, and 3 medical certificates

The Impaired Colour Vision General Direction (Part 1 - Class 1, 2, and 3 medical certificates, Relevant non-routine examination results to interpret and analyse) provides for an "other equivalent colour vision test acceptable to the Director" for the purpose of further investigating Colour Vision deficient applicants.

The other equivalent methods that are acceptable to the Director are:

- The City of London CAD test.

Other methods that are not acceptable to the Director are:

- All other colour vision tests not specified as being acceptable under the General Direction.

# Flow diagrams

The following flow diagrams are not a part of the Civil Aviation (Impaired Colour Vision) General Directions but are intended as guidance material to assist Medical Examiners in their utilisation of the General Directions.



#### Classes 1, 2, & 3 Impaired Colour Vision flow diagram

This flow diagram is intended to provide Medical Examiners with support and guidance in their utilisation of the General Directions. This flow diagram should never be interpreted in isolation and should always be used with reference to the appropriate General Directions. Nothing in this flow diagram should be interpreted in any way that is contrary to the provisions of the General Directions, the Civil Aviation Rules, or the Civil Aviation Act 1990.

Decision flow-diagram: GD/VIS/01/2013.1 Classes 1, 2, & 3 of [DATE] 2013