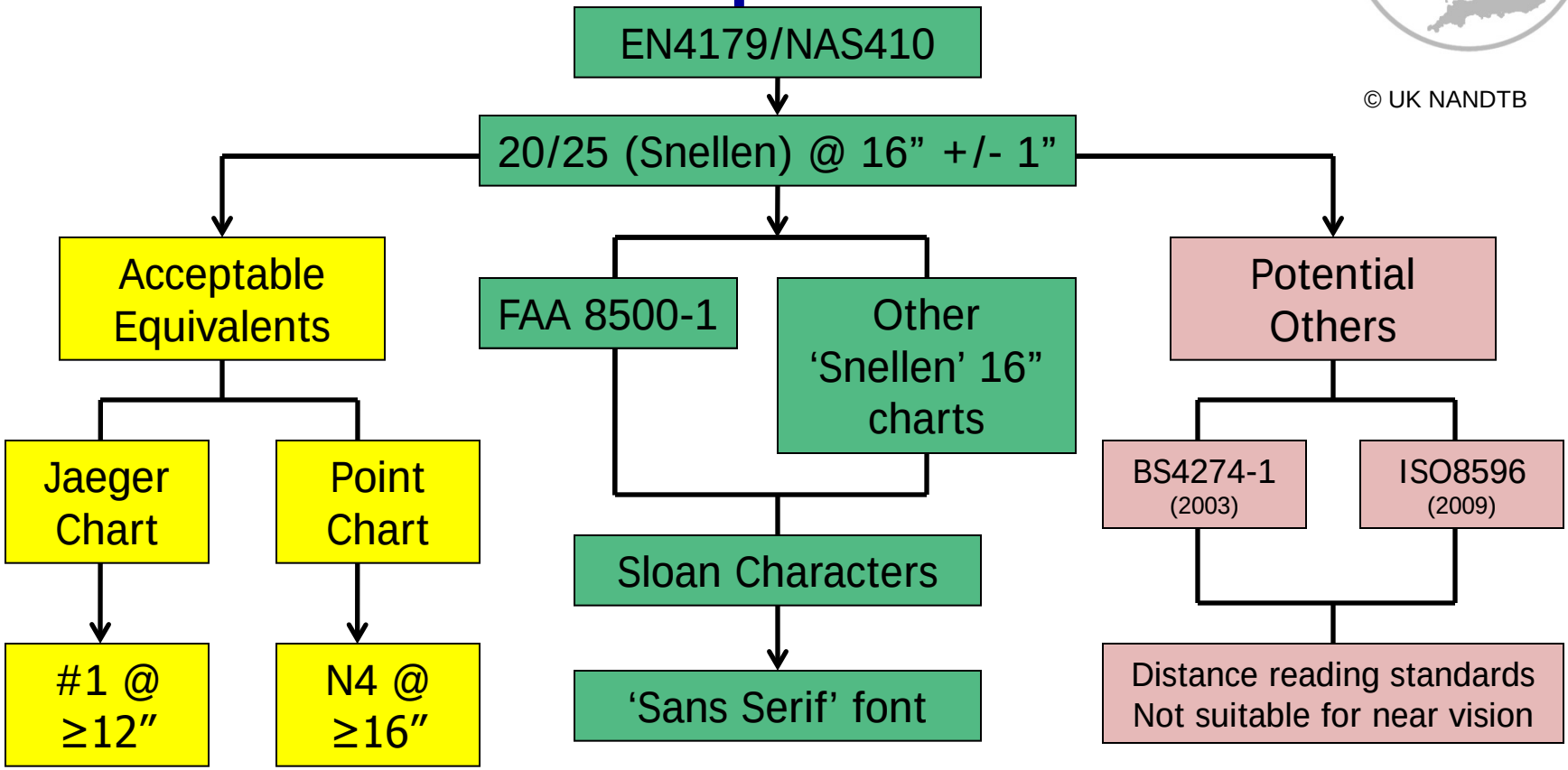
Near Vision Requirements

Presentation complied by UK NANDTB

Background

- EN4179:2005 required near vision acuity to Jaeger No. 1 or equivalent, not less than 30cm/12 in in at least one eye, natural or corrected.
- Vision acuity in EN4179:2009 changed to 20/25 (Snellen) at 16” (42cm) +/- 1” (2.54cm) or equivalent in at least one eye, natural or corrected.
- There are methods other than Snellen for examining near vision eyesight acuity and there is considerable debate even within the medical field as to “equivalency” of vision requirements.
- Responsible Level 3’s will find it difficult to obtain clearly defined supporting medical evidence regarding the equivalency of vision requirements.
- The numerous potential avenues for equivalency provides scope for variation and error.

Compliance



Global Standard

- An agreed global standard for NDT personnel would eliminate the problems of variation and mitigate the risk of error. A standardised solution is required taking the following essential attributes in to consideration:
  - Optotype
  - Optotype size based upon 5 minutes of arc
  - Optotype spacing
  - Eye to optotype distance
  - Illumination
  - Acceptance criteria
  - Use of both eyes (as used for inspection)

UK NANDTB Policy

- Single Option: - Visual acuity tests to be carried out:
  - Using the UK NANDTB chart and NANDTB/20
  - Using the actual eye-wear used in the inspection process
    - Note: This includes corrective lenses and/or eye protection as normally used.

- "Equivalents" not permitted within UK jurisdiction
- Existing certification valid until expiration
- Responsible Level 3 accountable for training and delegations

Note: No Medical/Optical alternative test permitted (eg Optometrist Standard tests)

- Functional NEAR VISION Acuity Test
  - Not for colour vision
  - Not medical examination
    - Employers should consider this separately – as for VDU operators etc

The Test Chart

NDT Near Vision Acuity Test

To be administered at a minimum distance of 400mm using white light of >500 Lux, using both eyes and with prescription lenses as used for inspection purposes.

Test Procedure

- **OUTLINE:**

- 1) Train/delegate personnel who will administer test
- 2) Download/Print Chart and verify quality – keep secure
- 3) Use one block of “E”s - better quality block
- 4) Verify illumination level
- 5) Ensure normal eyewear is used
- 6) Set distance 400±25mm
- 7) Establish the responses to be used
- 8) Administer test – candidate using both eyes together
- 9) Start at Line 1 working left to right and moving down lines
- 10) Acceptance Level is 5 out of 5 up to & including line 9

ADVANTAGES

- Is Universal - No language/alphabet dependency
- Based on vision acuity – not reading ability
- Based on resolution of 6 mins of arc - as 20/25 Snellen
- Can be administered locally
- Directly controlled by Responsible Level 3
- Basically “fail safe”
- Administered under defined conditions
- Auditable
- Based on accepted scientific principles (eg BS 4274-1, ISO 8596)
- Can be carried out in inspection area
- May be carried out in conjunction with annual appraisal