

Standard Category **5**

## S5606

## Colour Vision Standard

<b>Issue no.:</b>	A2	<b>Issue date:</b>	March 2015
		<b>Review date:</b>	March 2020

### Contents

<b>1</b>	<b>Purpose</b> .....	<b>2</b>
<b>2</b>	<b>Scope</b> .....	<b>2</b>
<b>3</b>	<b>Requirements</b> .....	<b>2</b>
3.1	Colour vision requirements.....	2
3.2	Colour vision test.....	2
<b>4</b>	<b>Responsibilities</b> .....	<b>2</b>
<b>5</b>	<b>Supporting information</b> .....	<b>2</b>
5.1	Background.....	2
<b>6</b>	<b>Person accountable for the document</b> .....	<b>3</b>
<b>7</b>	<b>Definitions</b> .....	<b>3</b>
<b>8</b>	<b>Abbreviations</b> .....	<b>3</b>
<b>9</b>	<b>Document history</b> .....	<b>3</b>
<b>10</b>	<b>References</b> .....	<b>4</b>

## 1 Purpose

The purpose of this standard is to specify the minimum level of colour vision for TfL staff and outline the method of testing.

## 2 Scope

This standard applies to all TfL staff who operate trains, read signals at stations and in depots or require safety on the track certification where normal colour vision is a safety critical requirement as set out in S1604.

## 3 Requirements

### 3.1 Colour vision requirements

Note: This standard must be read with LU Category 1 Standard S1604 Vision standard for LU staff who require safety on the track certification.

3.1.2 Colour vision for TfL staff shall be assessed by the red and green safety critical colour vision (threshold) requirements.

3.1.3 Colour vision must meet the colour assessment and diagnosis thresholds defined in this standard.

### 3.2 Colour vision test

3.2.1 The colour assessment and diagnosis test shall be applied using the following standard Normal (SN) unit thresholds, determined by TfL OH:

Deutan < 7 SN

Protan < 10 SN

## 4 Responsibilities

4.1 The TfL Head of Occupational Health shall determine the thresholds in clause 3.2.

4.2 Before the start of work, all staff included in the scope of this standard must inform their Employing Manager of any change in circumstances which may affect their vision or safety on the track

## 5 Supporting information

### 5.1 Background

The TfL Colour Assessment and Diagnosis (CAD) thresholds were developed in collaboration with City University and determined the minimum colour vision requirements for TfL safety critical work. This will enable an additional group of people, who consistently, or intermittently, fail the Ishihara test, to work safely despite having abnormal colour vision. Staff with a mild degree of colour vision impairment will be able to carry out LU safety critical colour vision related tasks if the threshold requirements are met. This work was related to incandescent signals,

Printed copies of this document are uncontrolled.

Page 2 of 4

deemed to be the most difficult colour discrimination task on TfL rail. Following signal upgrades, a risk assessment was undertaken to determine whether the existing CAD thresholds remained an appropriate method of safe assessment. The assessment concluded that the risks were very low.

## 6 Person accountable for the document

Name	Job title
Olivia Carlton	Head of Occupational Health

## 7 Definitions

The following topic specific definitions are created:

- within London Underground's Glossary of Terms (S1622) (a Category 1 Standard)
- from published sources that are clearly identified.

Term	Definition	Source
Colour vision	Colour vision is the ability to perceive and distinguish colours.	b) Merriam-Webster Medical dictionary, online.
CAD	Colour Assessment and Diagnosis – a method of assessing and diagnosing colour vision deficiency	b (this standard)

## 8 Abbreviations

The following abbreviations are created:

- from within the glossary
- from other, identified published sources.

Abbreviation	Definition	Source
CAD	Colour Assessment and Diagnosis	b (this standard)

## 9 Document history

Issue no.	Date	Changes	Author
A1	June 2011	This new Category Five standard has been developed to cover colour vision and colour vision testing and applies to LU employees as per DRACCT No. 00354.	Olivia Carlton
A2	Dec 2014	Standard revised to reflect the risk assessment regarding upgraded LED signals DRACCT No 03163	Donna Morgans

## 10 References

Document no.	Title or URL
S1604	Vision standard for personnel requiring safety on the track certification