

**Report on**

**Focus Group for**  
**Football Fans with Colour Blindness**

**Wembley Stadium, 29<sup>th</sup> November 2018**

**Jointly funded by**

**\*the Fans for Diversity fund & The Football Association**



[www.colourblindawareness.org](http://www.colourblindawareness.org)

## EXECUTIVE SUMMARY

Following the publication of the Football Association/UEFA Guidance Notes on Colour Blindness in Football <http://www.colourblindawareness.org/colour-blindness-and-sport/guidance-documents/> in June 2017, Colour Blind Awareness liaised with major stakeholders in football to find a way to collect the independent views of colour blind fans on the issues they face when buying tickets, watching live matches and following TV coverage of football matches.

The Football Association and the Fans for Diversity fund agreed to jointly fund a focus group for colour blind fans which was held in November 2018 at Wembley Stadium.

It was hoped the findings of this initial focus group would corroborate the points highlighted in the Guidance document. The focus group was hugely successful in this regard and was a particular success for the participants, not only as an outlet to expressing their frustrations but because they also greatly benefitted from this opportunity to share similar experiences and frustrations with other colour blind people – a situation none of the participants had encountered previously.

## CRITICAL POINTS

The following points were the most important for the colour blind football fans participating in the focus group.

Inability to follow many football matches due to kit clashes (between both sets of outfield players and/or between goalkeepers and/or match officials and outfield players) was considered to be an unacceptable situation.
Purchasing tickets online can be (i) incredibly frustrating, (ii) impossible without asking for help, (iii) more difficult on tablets and smartphones, and (iv) can result in fans missing out on tickets altogether due to the time it can take to make sense of the ticketing system, therefore ticketing must be addressed across the game.
More should be done to ensure balls are always visible.
Understanding whether a red or a yellow card has been issued can be a struggle, especially on TV coverage.
None of the group were previously aware that substitution boards had two different coloured numbers to denote 'on' and 'off' whilst three participants were unaware there were two numbers due to their inability to see red numbers against a black background, yet this issue could easily be rectified by changing the colours used to different tones of red and green.
Television makes games much harder to follow than watching the same game at the ground and this problem is even worse if trying to watch a game on a tablet or smartphone.
Games under floodlights are much harder to follow than games played in daylight, although shade can cause problems in daytime matches.
TV graphics, particularly penalty shootouts, are hard to understand.

## 1.0 Introduction

- 1.1 Football is a global sport for everyone to enjoy irrespective of their nationality, ethnicity, religion, gender, age, sexual orientation, or whether or not they have a disability. Attending a live football match should be an inclusive experience for all. Unfortunately, the needs of colour blind fans are not currently taken into account in football, meaning many games can exclude up to 8% of men (0.5% of women). As football is predominantly a male spectator sport, up to 6% of a football crowd can be colour blind.
- 1.2 An estimated 3 million colour blind people live in the UK and over 40 million within the UEFA confederation. Some televised competitions can have an audience of billions. For example, the UEFA EURO 2016 tournament had a cumulative TV audience of 2.5 billion – meaning an estimated 140 million of these viewers would have had a colour vision deficiency (CVD, colour blindness). The problems colour blind football fans faced when attempting to watch the opening (colour blind kit clash) match of the 2018 FIFA World Cup was summed up in a BBC online article here <https://www.bbc.co.uk/news/world-44535687>.

## 2.0 Definition of disability

- 2.1 The social model of disability says that disability is created by physical, sensory, intellectual, psychological and attitudinal barriers. The social model identifies solutions to remove or reduce these barriers within society, rather than trying to fix an individual's impairment or health condition. The social model is the preferred model for disabled people. It empowers disabled people and encourages society to be more inclusive.
- 2.2 For the purposes of disability legislation, it is widely accepted that a person has a disability if he or she has a physical or mental impairment that has a substantial and long-term effect on his or her ability to carry out normal day-to-day activities affecting one or more of several categories including 'speech, hearing or eyesight'. It is important to remember that colour blind people face hidden barriers and can be considered to have a disability.

## 3.0 Colour blindness and its implications for football fans

- 3.1 Colour blindness (colour vision deficiency, CVD) is one of the world's most common inherited conditions and affects an estimated 300+ million people worldwide.
- 3.2 Statistically speaking, colour blindness affects 1 in 12 males (8%) and 1 in 200 females (0.5%).
- 3.3 Humans see colour through three types of specialised cone cells in the eyes, which absorb red, green or blue light respectively. With colour blindness one cone type doesn't operate normally. There are different types and severities of colour blindness, but most types involve defects of the red or green cone cells. People with colour blindness see many colours, not only reds and greens, as the same so many combinations of colours can be confusing.
- 3.4 The front cover of the FA/UEFA Guidance below shows how some EURO 2016 kits appear to many people with colour blindness.





3.5 In addition to kit clashes the Guidance document considers many aspects of football which can be problematic for people with CVD. Colour Blind Awareness instructed Cathy Long of Devoted to facilitate the colour blind football fans focus group, to ascertain which problems fans feel are the most important to address and to report upon the findings of the group. Devoted's full report is attached at the end of this document.

#### **4.0 Conclusion**

**The outstanding conclusion of the focus group is that distinguishable kits and balls are key to the enjoyment of football for colour blind people and all other factors discussed within the focus group are secondary in comparison.**

#### **5.0 Contact details**

For further information, please contact Kathryn Albany-Ward at Colour Blind Awareness

Website: [www.colourblindawareness.org](http://www.colourblindawareness.org)

Email: [kathryn@colourblindawareness.org](mailto:kathryn@colourblindawareness.org)

Tel: +44 (0)1844 396336

**Ends**

# Report of Focus Group – on behalf of Colour Blind Awareness

DATE: 29<sup>TH</sup> NOVEMBER 2018

VENUE: WEMBLEY

PARTICIPANTS: 8

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*“People with normal vision don’t see what we see. If they did, they would understand.”*

**Aim:** Ascertain the nature and extent of difficulties experienced by colour blind fans watching football

**Report:** This report contains summaries of discussion on each point, direct quotes in italics, conclusions and analysis of the participant responses.

## Methodology and Participant Profile

Participants were recruited via social media and industry contacts. All were colour blind, and all were football fans who attend matches as well as watch on TV. Some were also participants in the game, as match officials and video operators for instance, at national game level. All participants were male, which is unsurprising given the huge statistical difference in male and female colour blindness.

Participants were supporters of different clubs, with no two participants supporting the same team. All but one were fans of clubs whose home kits were easy to see against grass; home kits were blue, white, yellow. Only one was a fan of a club with a ‘difficult’ kit from a colour blind perspective; Liverpool.

Age range: 25 to 55

Gender: 100% male

Disability: 1 of 8 participants

## Teams supported:

Team	Colours
Dover Athletic	White
Juventus	Black and white
Leicester City	Blue
Liverpool	Red
Oxford United	Yellow
Queens Park Rangers	Blue and white hoops
Southampton	Red and white stripes
Tottenham Hotspur	white and blue
West Ham United	claret and blue

The panel was observed by Kathryn Albany-Ward and Howard Crews of Colour Blind Awareness.

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## Introductory Discussion

The group was asked if they had a preference for terminology when describing the condition of colour blindness, for example whether they preferred Colour Vision Deficiency. All agreed that “colour blind” is best, “although it can be misleading as some people think we only see black and white.” Colour Vision Deficiency (CVD) was thought to be more accurate but participants felt that colour blindness is understood by more people, and CVD can be confused with Cardio Vascular Disease.

### 1. Background and Context

#### 1.1 Discovering colour blindness

Most did not remember a time when they were not aware of being colour blind. Most didn’t have a recollection of being tested. Not everyone was aware of what type of CVD they experience.

Conditions were picked up from artwork in primary school, chemistry lessons etc. There was general agreement that teachers often don’t understand or refer for a diagnosis. One discovered on application to the RAF.

##### Comments

*“Apparently I told my mum and dad ‘how weird they’re playing in the same colour’ ”*

*“I kept away from colours, and learning the names of them because they were irrelevant”*

*“I thought it was my fault for not studying hard enough at learning colours”*

#### 1.2 Dealing with everyday issues

Traffic lights are very confusing and can be hard to distinguish from other lights.

Toilet doors are a significant problem; telling the difference between red for engaged and green for vacant can be impossible. Buying clothing can be difficult too. But it’s easier to ask a stranger about clothing colours than the colours of toilet door locks. That’s just embarrassing as people wonder why you want to know!

Colours are used so much in technology: LED lights to indicate charging, red, green flashing lights on set top boxes. Colours are used on food for sell by dates. Uniforms can be confusing too, especially in hospitals.

There is much more expectation these days that we will use colours in design, software and presentations.

When colours are close together it’s worse.

There was unanimous agreement that the question “what colour’s that then?” is tiresome.

##### Comments

*“The solutions out there simply don’t work, or don’t help. There are no easy fixes and apps [which purport to identify colours] are sensitive to movement.”*

*“People want to understand what we see, but we don’t have the tools to describe what we see”*

## 2. Attending Football Matches

### 2.1 Buying tickets

Buying tickets online can be tricky: is often very frustrating. Some fans have missed out on a choice of tickets due to the time it has taken them to figure out the colours. It can take longer for colour blind people to buy tickets. Fans are calling on partners or family members to assist; some can't buy independently.

The plans of the ground can be confusing. Some clubs use lots of different colours on the ground map and they're all very similar. They use charts with price points on them and blocks of colour next to each other.

The use of colour spots to delineate which seats are available / unavailable / put them in the basket makes it difficult. Problems are often experienced when trying to match the colour key with the coloured dots on ticketing systems or on some stadium plans.

On a mobile phone it can be harder than on a laptop.

Secure pay: Captcha's can be difficult if it is necessary to see colours. - all ones with red cars for instance.

Suggestion:

Why not a cross instead of red to indicate availability? X and O not red and green?

#### *Comments*

*"Your eyes don't hold the colours when moving from the legends to the blocks. You follow the light and you can't keep it."*

*"The number of colours 2 or 3 ok but 4 or 5 makes my head spin, it's too hard"*

*"Why do we always have to use green for good and red for bad? Why does it have to be like that? It's the most common form of colour blindness!"*

### 2.2 Physical tickets

Tickets themselves are usually clear with, no particular issues. They are quite plain these days with little use of colour. It was agreed that information on physical tickets is usually ok but sometimes coloured stadium plans are hard to follow.

### 2.3 Finding your way around the stadium

It was noted that for this meeting participants were sent information about the yellow car park, red car park, and green car park. However, as the colours are also spelt out in most signage around Wembley, this didn't present any problems. Generally the group reported that wayfinding is pretty easy, with no significant difficulties reported.

Most signs for facilities are clear; black on white, white on blue, easy to see. But sometimes red on black is used and it's so hard to see. When the issue of red and green toilet door lock indicators was raised, there was agreement that red and green indicators are not necessary and most found this very frustrating!

Steward jackets usually have explanations written on jackets so colour is not so much of an issue. It's fine if they are approached from the rear. The text makes it much easier.

For NFL games fans are expected to follow coloured routes.

Red, amber and green lights are used to show which concession is coming through the turnstile. Concern was expressed for any colour blind stewards. Most fans present didn't know when colours changed at turnstile entry so listened for the 'click' rather than waiting to see the light turn green.

#### Comments

*"You're normally with other people so you just follow them."*

### 2.4 The Match

Most weeks there are kit clashes where colours are hard to distinguish, even when teams clearly don't need to change from their usual home kit.

The group raised some recent kit clashes, particularly involving West Ham United who have had kit clashes for their most recent three consecutive games. Disappointment was expressed that clashes are still happening even though the FA Guidance has been available for over a year. There was a general feeling that obligations to sponsors and the ability to sell replica kits are the main reasons behind this and also that kit clashes are happening more often. There are also issues with referees clashing with teams, quite often with goalkeepers. Numbers on stripes can also be difficult to determine.

There was a lengthy discussion around kit regulations and how to resolve the issues, and a clear lack of sympathy as to reasons why this hasn't yet been resolved. The consensus was it this was not always terrible in the stands but watching on TV can be impossible.

Pitch markings can also be an issue especially blue in frosty or snowy conditions.

AC Milan v Inter Milan (red +black v blue+black) for two seasons running when they were both quite dark kits, it was like twenty two people in dark / black kits. But when the kits were lighter tones in the past it worked ok.

The Sheffield derby didn't used to cause an issue in the past. But now it's more difficult. Is this down to the shades or material?

An ex-referee on the panel has asked teams to change kits due to a colour clash; running the line has actually stopped games and asked the referee to get the goalkeeper to change shirts as he can't see it.

The role of the referee was in determining kits used on the day was discussed at some length. The group felt that the onus is on competition organisers and governing bodies to resolve kit clashes.

Some specific examples were given:

- Spurs visiting Leicester City and wearing dark blue
- Burnley in blue v Leicester City but with different colour shorts.
- Manchester City in dark blue v Leicester City.
- Forest Green Rovers are harder to see in daylight
- Barnet v Oxford Utd, orange v yellow. Referee said it was a colour clash and got Oxford to wear Barnet's away kit
- Liverpool v PSG, PSG wore a special Michael Jordan themed kit in black against Liverpool's red
- Leicester City v Liverpool in a friendly. Black v red
- Southampton played Leicester in a variation of the third kit and it was hard to see.
- Borehamwood v Gateshead, white v pale green when floodlights came on couldn't see.
- Tottenham Hotspur's mint green kit is hard to see. Spurs v Newcastle should be ok but wasn't due to mint green v a lot of white
- Tranmere Rovers v Borehamwood – blue and white v pale blue

## Comments

*"When goalkeepers wore multi-coloured or at least patterned kit they stood out and could be seen really clearly"*

*"Even if you have 2 colours that look quite distinct and they look fine at first, once there is quite a lot of movement and it kind of blurs around you start.....it's like.... no, you try but you can't see it."*

*"It's the ones commentators complain about for being garish, that are easier to see for colour blind fans"*

*"The EFL are saying it's the refs responsibility but it's not, it's only for the ref to decide on the day if there is a colour clash that affects him and his team but not whether it affects anybody else."*

*"In the 70s we didn't have these problems. Every team had one dark shirt and one light one. But now the materials are different. You had single colours. And the manufacturing processes are different. So you can do all these wonderful things with colours and stripes, and marketing people want to make the most of that. Fabrics are shinier. For a lot of people this is great. But not if you're colour blind."*

*"Kits that have multi colours like West Ham or Aston Villa can be more difficult to see. It increases the chances of there being a problem. So sometimes the sleeves are what you look at first. There's more chance that when the colour is moving it all goes into a mish mash so you're not quite sure, and even if the colours are quite distinct the fact that one of the kits has a lot of colours makes it just confusing"*

*"Now that referees don't have to wear black at the top level, teams wear black or really dark colours and they are often hard to see [against other colours e.g. red]"*

## The ball

The pink (mango) ball used in recent years in the FA Cup was considered to be a serious difficulty. Fans described it as pale grey and they couldn't follow it across the pitch. It *"disappears into the pitch"* whether on TV or live. When fans raised the issue they felt that Nike *"gave lots of waffle about how great it is"*. But *"the technical design, flight etc doesn't matter if we can't see it!"*

It was agreed that everyone sees balls slightly differently. And it can be difficult to see which way modern balls are spinning due to all the colours on them.

Squash balls were made luminous for TV as the TV cameras couldn't pick it up and fans felt that more should be done to ensure the ball is highly visible at all times.

## Red and yellow cards

There was a discussion on red and yellow cards. Some fans struggled to see which card had been issued and on TV had to wait for commentary or see what happened next to find out.

It was felt that referees can be too quick with cards and should hold them up for longer, make it more obvious. But fans also accepted that this is only a momentary problem as it is obvious from the crowd and player reaction.

## Comments

*"Red and yellow cards? I've never muddled them when officiating but when a referee holds one up I can't tell the difference and I don't know why. I only know which colour it is by the crowd's reaction."*

## **Substitution boards**

There was astonishment from some fans on discovering that substitution boards have two colours, red and green for players coming off and on. Most can see the numbers but didn't realise they were different colours.

Three people were unable to read the red numbers as they didn't realise they were there.

It was agreed that this matters more at a lower level of football where there are no announcers.

## **Scoreboards**

There was a consensus that new scoreboards are sharper resolution and easier to read.

### *Comments*

*"I've used the boards as an assistant referee and I didn't know there were two colours. I might have confused people and got the wrong colours!"*

*"Unless you see what we see, or understand what we see, you don't understand actually are important to what you see."*

*"Rugby can be confusing too. But with rugby at least there are 2 lines of players to a certain extent. But with football, players are all over the pitch."*

*"I video matches and I'm trying to capture what the manager wants to see. But sometimes I'm videoing and I'm thinking I've no idea who's who."*

*"Socks are very important on TV. You're looking at a crowd of feet and not the shirts. Which sock did it come off?"*

## **Solutions**

If every team had to have one pale kit and one dark there would always be a clear option. So you would never have pale colour playing against white.

One in light one in dark will work across the board. Clearly the current system is not working.

## **2.5 Watching on TV versus being at the match**

There's a big difference; looking through a lens is harder.

Some camera angles are very difficult, especially when play moves between light and shade as players can 'disappear'. Overhead TV shots are the most difficult, especially when there are kit clashes with the pitch for example a goalkeeper in green, or where the goalkeeper kit clashes with outfield players. When looking at the players against the pitch, the perspective can make it more difficult. Being at the match is easier as you have more indicators to tell you what's going on. You can see the whole pitch, know where players are expected to be and can follow the whole game rather than selected shots which may not be clear.

When cameras focus in on a particular player it's harder as you don't have any other identifiers, can't tell where on the pitch he is but you have a wider view live and know what's going on. It's not just the kit clash it's the clash between the kit and the pitch.

The more colour noise there is the harder it is; LED boards, crowd etc

Match officials can be easily confused with players. Floodlighting makes games much harder to follow, daylight is much better (aside from the shade issues).

Stamford Bridge and Villa Park were mentioned as being particularly difficult viewing experiences, possibly because of the camera angles. Quite often Chelsea “everything looks black” and the same can happen at Villa Park is horrible too. When a pitch is half in daylight and half in shadow it can be particularly difficult.

Garish boots help; they make players easier to identify.

Fans expressed the desire to know which colour kits fans would wear in advance. Some said they would be less likely to want to go if they knew that the colours would present problems for them.

One fan had discovered that he could ask the EFL up to a week in advance. But he pointed out you often have to buy your ticket weeks in advance so this wasn’t particularly helpful.

When the players warm up it can be difficult to see the cones.

Some big screens at grounds are poor quality but this doesn’t greatly disadvantage colour blind fans.

Day time viewing is easier than evening matches due to the floodlights. Refereeing is more difficult under floodlights too.

### **TV Graphics for penalty shout-outs**

It was unanimously agreed that penalty shoot-out graphics are hard to follow. Green balls for penalties scored and red balls for penalties missed make no sense to colour blind people. But it was also agreed that there is a simple solution:

*“Using a tick or a cross makes following the progress so much easier”*

### **3. Strategies deployed by fans to get around the issues presented**

- Have someone with you who can tell you what’s happening
- Focus on the bits of the kits you can see, e.g. socks or sleeves
- My kids give me commentary
- Moved around the stadium to try different angles
- Get someone else to buy tickets. Speed is of the essence and you can miss out.

### **4. Raising the issue with clubs and / or football authorities**

One fan tried to get a refund on their ticket money for the West Ham United v Tottenham Hotspur match. He raised it with the EFL because they allowed the kit colours; *“I bought ticket from West Ham but I don’t feel right asking them for my money back as it wasn’t their fault that Tottenham played in blue”*. EFL responded that it was the referee’s responsibility, not theirs.

*Q: Would fans be prepared to sit a test to prove their colour blindness in order to be reimbursed?*

Agreement: Yes. If you only needed to do it once. If it was a one-off and all clubs accepted it – yes. But could other people fake the test? Do we still need to prove (more broadly) that it affects our enjoyment? If I knew about the colour clash in advance I wouldn't have gone, taken my kids spent money on travel expenses etc?

#### *Comments*

*"I'd feel stupid asking for my money back because I still believe that people don't understand how important colours are on a football pitch. Until someone has watched a football match with both teams, refs and goalies all wearing the same colours I truly believe they won't understand what we see"*

*"People with normal vision don't see what we see. If they did they would understand."*

## **5. Questions and comments from the Panel**

*Will this be the first of a series? Will we get together as a group again? We're happy to be involved as much as you want, whatever is going to make a difference. We want to see this through.*

*We've all learnt tonight how different colour blindness is for different people. It's the first time that we've been in the same room as a group of other colour blind people.*

*What do we do if we can't see a match we've been to?*

*Who do we complain to if we can't see a match on TV? Sky / BT?*

## **6. Conclusions**

**The outstanding conclusion is that kits and balls are key to the enjoyment of football for colour blind people and everything else is secondary.**

Colour blind fans want other fans to see what they see.

In football it's really important to be able to know and see what colours teams are wearing. It's a fundamental feature of the game.

The system to prevent kit clashes isn't working. Is the software being used but clubs are ignoring it? It might be saving a few matches but clearly there are still problems. The reason for the continuing problems must be identified. There are far more colour clashes than there used to be.

The elite game is faster these days and this makes it more difficult. Materials and patterns are different, lighting has changed. There are many factors involved in making clashes more of a problem.

Each match should contain five different colours – two teams, officials, keepers.

Teams should be able to say at start of season, in our league game against each team here's what we're going to wear. Leagues should be simple. Cups are harder.

*"We shouldn't be talking about us choosing whether to see a game based on the kits. They should make the change not us."*

Size is important. For example the smaller the graphics blocks are the harder it is to see the difference, on penalty shoot outs.

An overall theme developed: there are simple solutions, nothing special and in fact being colour blind ought not to be a hindrance at all. Whilst colours may enhance our lives, we shouldn't need them to mark out important features. In particular the habit of using red for danger and green for safe is unnecessary but something most people accept without questioning.

## 7. Evaluation and Observations

Evaluation	Observations
Were the group engaged?	This was a particularly engaged group who were keen to understand more about the issues
Were they all able to take an active part?	Without exception they took part an active role in the discussion, were interested in the process and keen to be involved further.
Were they polite and respectful of each other's views?	100% of members were polite and respectful of each other's views
Did any single member dominate the responses?	No
Were there any disputes?	No
Does the information answer the research objectives?	Yes
What have we discovered? Did we "confirm hunches" or gain new insight?	We confirmed views other fans had expressed and understood them in more detail
Were there any surprises?	Fans were unaware of the colours on substitution boards
	There was a strong camaraderie which developed quickly amongst a group who had not previously met