

# IDAG Colourful Crossings Statement

## Introduction to Crossings as Mission-Critical Devices:

IDAG affirms that it understands the principal value of the Colourful Crossings initiative. Indeed, if executed with an exhaustive equality and risk assessment, the designs of Colourful Crossings could be set to a standard as to not disadvantage anyone within the community.

It is important to understand that crossings are safety critical devices. They define the point at which it is safe for a pedestrian to interface with the road, cyclists, drivers, and other pedestrians, typically in a limited timeframe. The primary factor dictating the success of a crossing is therefore its consistent visibility to the user in a visual, auditory, and tactile sense. Sufficient visibility allows the pedestrian to identify and utilise the crossing quickly. Failing to provide sufficient visibility can invoke hesitation and reduced confidence during use, potentially resulting in the pedestrian walking more slowly across the crossing or, even more problematically, not being able to identify the crossing.

It is therefore critical that the design of the crossing considers users with the widest possible range of abilities, operating in the widest range of scenarios. For instance, this can range from a non-disabled user in day-time lighting, to a low vision user trying to identify a crossing in night-time lighting. Additionally, Colourful Crossings must consider physical and cognitive impairments.

## Visual Impairments:

Diseases and conditions leading to visual impairment can have significantly varying impacts on visual function, meaning that visually impaired pedestrians can have significantly varying abilities. Only a small minority of those that are visually impaired are, in the legal term, blind (defined by a very poor acuity) and/or have no sensitivity to light. It is therefore incorrect to assume that tactile or audio cues are sufficient to identify crossings for the visually impaired. Instead, the majority of the visually impaired will still use any of their remaining vision to identify a crossing. The following are examples of how different colourful crossing designs can affect crossing visibility for specific visual function.

Poor contrast and light sensitivity: An example of diseases causing a reduced ability to distinguish different coloured or contrasting objects are hereditary retinal diseases such as Retinitis Pigmentosa. Those with this condition typically experience poor night vision and reduced visual field. A crossing that is brightly coloured with good contrast to the surrounding paving is therefore very important for these users, and a majority of other visually impairments. Such a crossing can be easily spotted in the reduced visual field in good lighting and, in poorer lighting, the brightness of the crossing can aid its visibility. This may lead to an improvement in the visibility of the standard crossing for such users and it is therefore important to take advantage of this to create better designs.

Poor acuity: Conditions such as Age-Related Macular Degeneration (AMD) primarily cause reductions in visual acuity (simply, the 'clearness' or 'sharpness' of vision), while still maintaining better contrast sensitivity and visual field than other diseases. While a crossing with good contrast to the paving is still beneficial here, the patterns displayed by the crossing become an even more important design consideration. This is as darkly coloured spots or

patterns may appear as holes or obstacles in the road, causing the user hesitation or restricting their use of the crossing.

Additionally, the visually impaired rely on cognitive mapping and repetitive visual cues to assist their mobility. For instance, standard pedestrian crossing buttons are identified by some users given their familiar colour and positioning, even if these users do not possess sufficient vision to clearly see the button. This principle applies to crossings. If a radically different crossing design is used or no consistency is maintained between crossings, some visually impaired users may not be able to identify the crossing at all, or may mistake it for warning signage.

In summary, colourful crossings can be an opportunity to improve the visibility of standard crossings for the visually impaired, but only if each design decision is consistent and considers the needs of a wide range of visually impaired users. Failing to do so can have a dramatic negative impact on the visibility of these crossings to the visually impaired, thus reducing the safety, confidence, and independence of visually impaired pedestrians.

### **Cognitive Impairments:**

Colourful crossings may cause difficulties for people on the Autistic Spectrum, or other groups who have difficulties with processing and integrating sensory information. Both patterns and bright colours can be problematic and cause sensory overload. For some, this may result in distortions, which could cause confusion while walking across the road, lead to fear of falling, and increase stress/anxiety. This is particularly true of repetitive or narrow patterns (stripes, for instance, are particularly problematic). Others may feel nauseous while looking at the colours or patterns, and either avoid the crossing entirely and find a different route, or look away while crossing the road. This yields an immediate increase in safety risk to the user.

Best practice from architectural/interior design commonly suggests that neutral colours without patterns -- and especially not repetitive, narrow patterns -- should be used for floors. It is therefore important that a representative working group is used to identify the cognitive impacts arising from any proposed designs, assessing the extent to which they adhere to this best practice.

Consultation with the National Autistic Society should provide further information or circulate the consultation information to neurodiverse people who have experience of using the crossings.

### **Summary:**

IDAG understands that Colourful Crossings could yield a positive impact on some groups by making certain areas more pleasant. In conjunction with additional lighting, improvements to perceived safety in an area can positively affect women, older, disabled, LGBTQ+ and BAME people. There is also potential for the Colourful Crossings to become more visible than standard crossings to some partially sighted people if the right design decisions are made. Improved lighting would aid this further.

Local disabled people need to be involved in reviewing the design and should be engaged with to make sure that the colours and patterns chosen are appropriate. Failure to

adequately and consistently design Colourful Crossings can have significant negative impacts on pedestrian mobility and safety given the mission-criticality of street crossings.