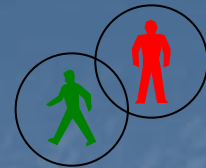


# Kerbside Detection

## Surface-mounted Detector Pad Installation Considerations

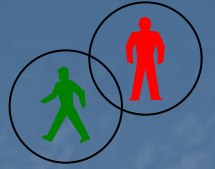
In Conjunction with Techmiracle Limited – Integrated Traffic Solutions



# Introduction

- The X-Flo In-ground Pedestrian Detector is now HA Type Approved and has been installed at several locations in the UK over the past 2 years - generally at PUFFIN Crossings
- The installed product aim is to reduce congestion and improve safety at crossings
- One of the key advantages of in-ground detection (versus overhead) is the very defined “Must Detect” and “Must Not Detect” zones
- While installation is generally very straightforward, there are a number of considerations
- This presentation highlights some of these considerations and invites comments from those present

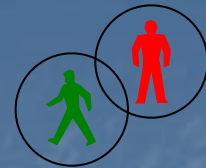
# Typical UK Installation



Reading, Berkshire



Diseworth A453, Leicester, UK



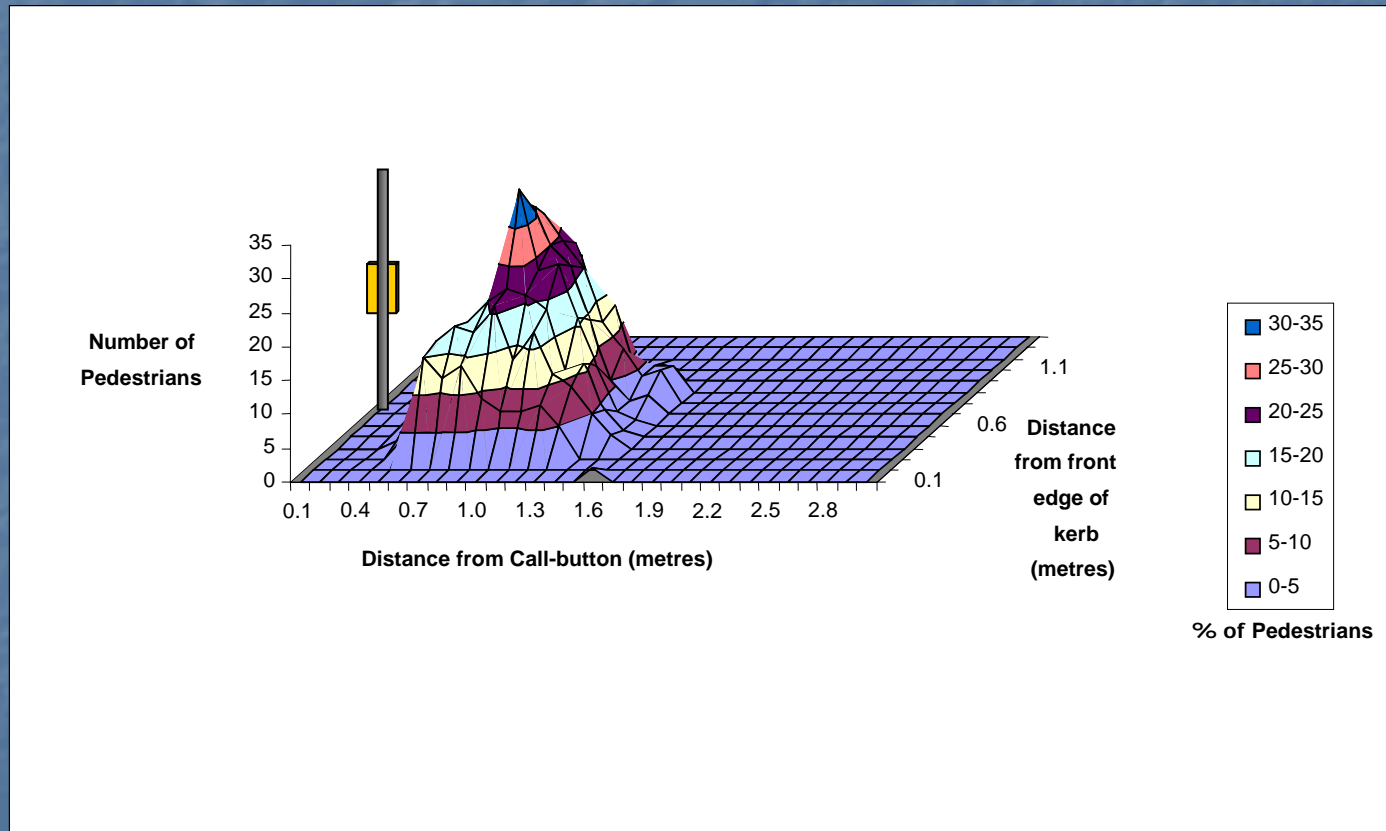
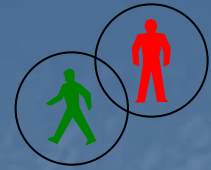
# Detection Zone

- Cover where pedestrians might wait? or...
- Define where pedestrians should wait?
- Which of these is paramount in respect to cost and effectiveness?
- Identify where pedestrians that do wait, stand while doing so

# Pedestrian Wait Zone

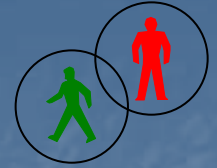
No Tactiles

Only pedestrians who pressed call-button and waited for cross signal.

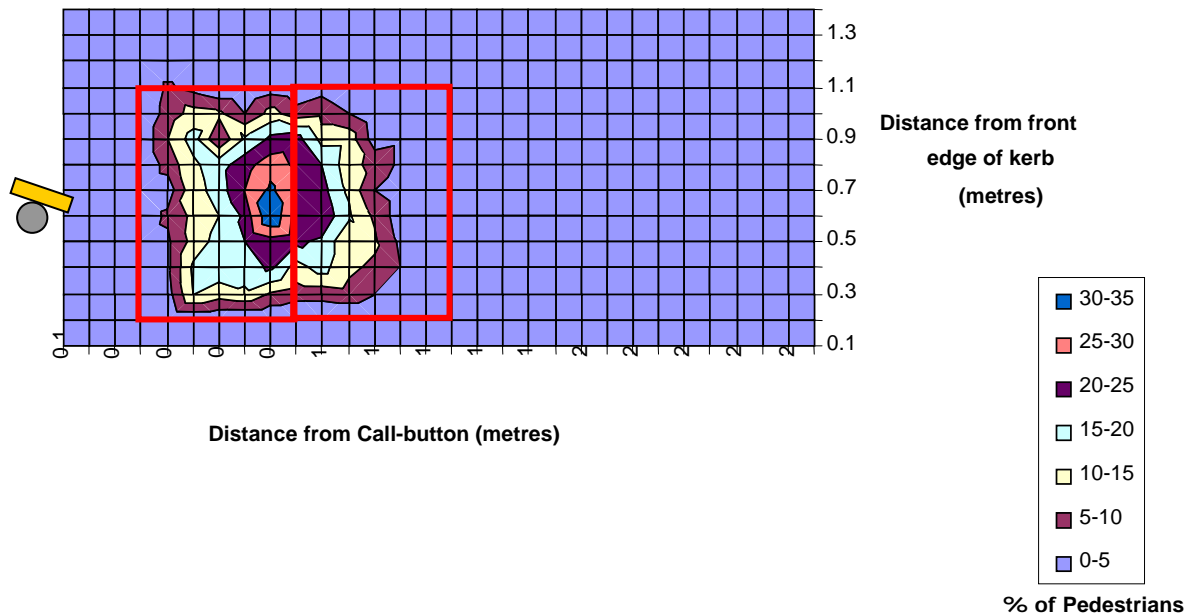


# Pedestrian Wait Zone

## No Tactiles



Only pedestrians who pressed call-button and waited for cross signal.



# Pedestrian Types

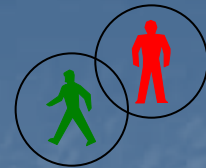


- Generally regular users
- Unfamiliar users e.g. tourists
- School children
- Elderly/disabled
- Shoppers
- **Other???**

# Regulations/Guidelines

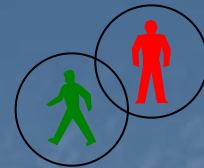


- Overall Tactile layout of detection and non-detection zones
- DfT Guidelines – Local Transport Notes 1/95, 2/95 (now pretty much up to engineers to determine exact layout)
- Local byelaws
- **Other???**



# Other Physical Considerations

- Position of poles and existing junction boxes etc.
- Width of ramp
- Location of far side ramp
- Pavement width, through foot-traffic, fences, walls...
- Utility access covers
- Vehicle behaviour
- Puddles
- Other???

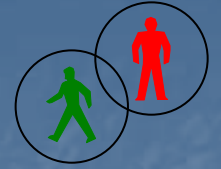


# Placement of pads



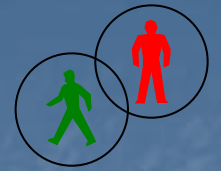
Poole, Dorset

# Placement of pads



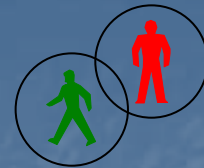
- Number required to cover wait zone?
- Landscape/Portrait
- Mixed
- Separations – why? How far apart?
- Slope profile
- Other???

# 4 lane (dual carriageway) 50kph



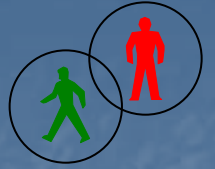
## Auckland, NZ

# Orientation of Pads



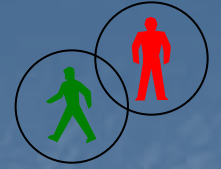
Crosby, Merseyside

# Control of Wait Zone

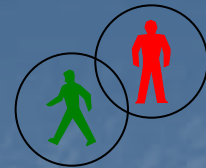


- Barriers
- Landscaping – benches, gardens, boulders
- Signage – temporary or permanent
- **Other???**

# Other Considerations



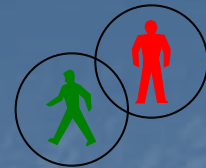
- Pedestrian Behaviours
- Driver/Pedestrian visibility
- Driver behaviour
- Safety
- Cost
- Uniformity
- **Other???**



# Conclusion

So what are the ideal parameters?

- Minimum of 1 pad
- Maximum determined by physical limitations of the site & cost
- Maximum distance between 2 adjacent pads 100mm?
- Distance from pole 200mm > 600mm
- Distance from kerb 0mm > 300mm (depending on location of pole)
- **Other???**



# Summary

- Globally, the uptake by cities and the public understanding of this technology, has been very good
- Supporting education – local newspaper, temporary signs, school notices etc might be considered in special circumstances
- Traffic Engineers sharing information, ideas and experiences will enhance the implementation of this technology
- Techmiracle Limited aim to coordinate site visits and peer reviews in the near future.