

Balfour Beatty

Sightline System for the Visually Impaired

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Balfour Beatty

Balfour Beatty dig approximately 56,000 excavations per year on the GDSP contract alone.

The majority of these are in the public and impact on members of the public who use the highways on daily basis.

There is always the potential for the excavations to impede the routes of the general public but more so the Visually Impaired.

We were tasked with looking at any Innovations which could minimise both the risk and also give awareness of our works in advance

Sight Line Project



Sightline is a multifunctional project including a number of groups who have undertaken a study of the impacts of the environment. The Visually Impaired come across these in their normal daily routine and it covers a number of topics including streetscape, assessing journeys through various streets and interviews with a number of participants.

Study



Unguarded excavation



Sign directing pedestrians into works

Sightline undertook a study of 100 sites in London. 7 had serious issues which had potential for a visually impaired person to come into contact with the excavation

Barriers



A new strip has been added to the reverse side of the barriers from the Red and White visibility strip. The new strip contains a line of raised Tactile beads and a prominent Black and Yellow Saw Tooth Pattern easily identifiable by people with Impaired vision allowing them to determine if they are on the correct side of the barriers.

Beacons



The Beacon has the basic site information stored on a QR code which can be read by the users App

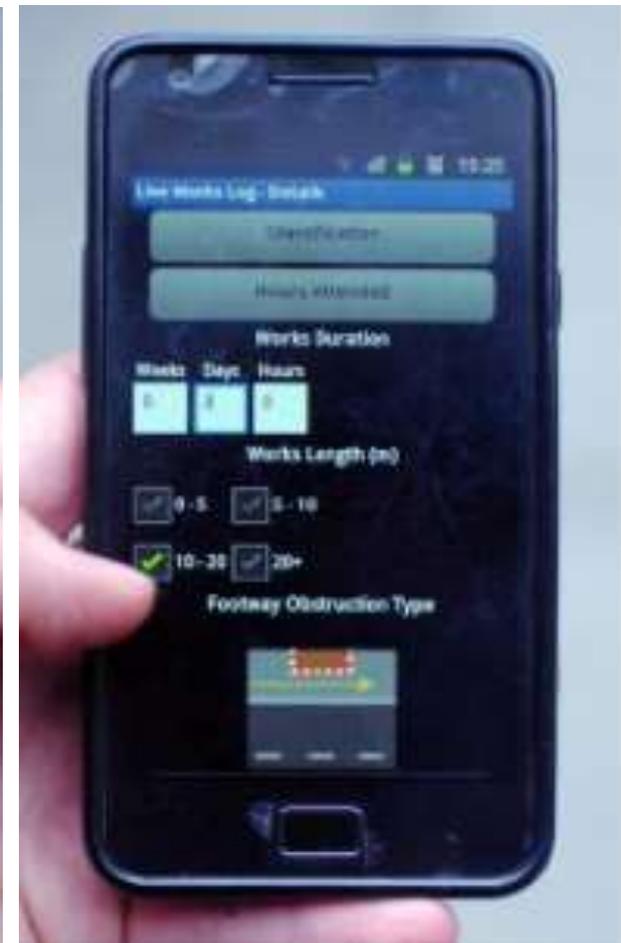
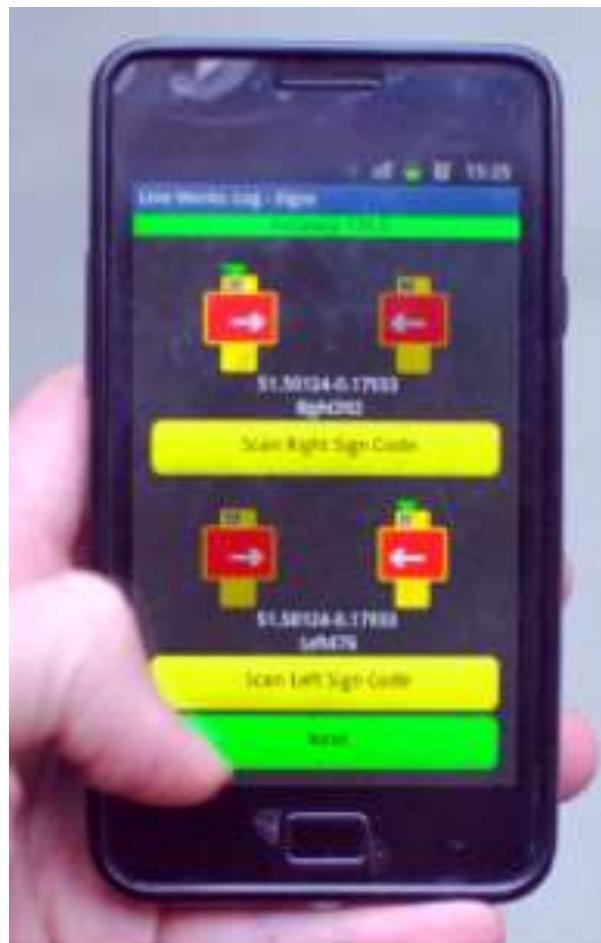
Early Issues

Beacon signals / App

There were two issues regarding the signals from the beacon identified during this project:-

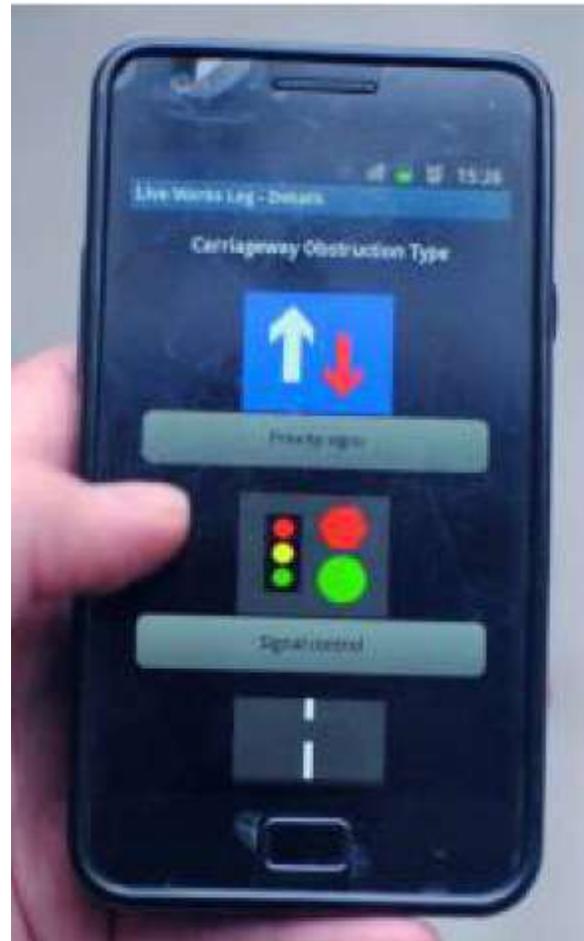
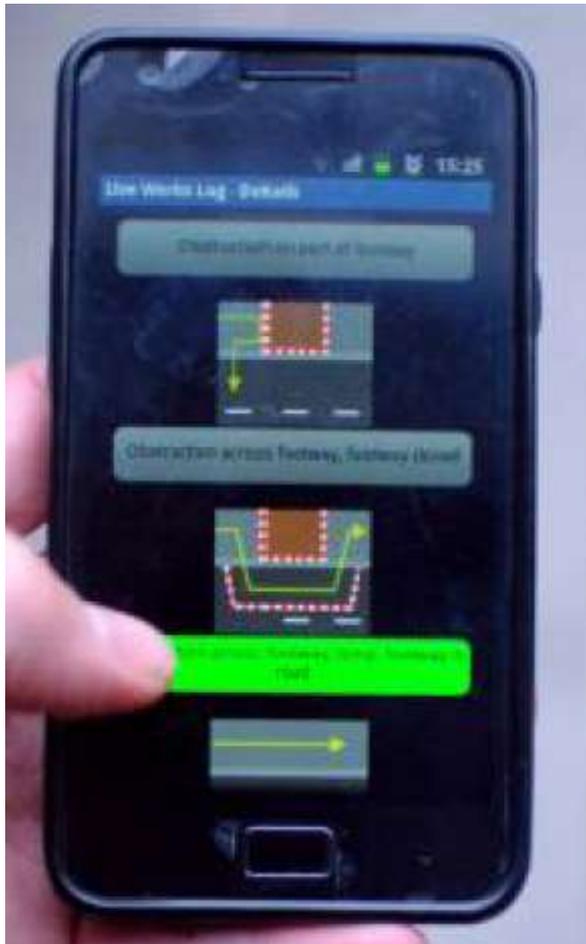
- **The signal strength – Initially the signal strength was too strong leading to the potential for users to become confused with messages being received that actually did not apply to their current location or route. This has now been addressed with the signal strength now reduced to a distance where it only triggers the App when a user's is within close proximity of the works but with enough warning to enable alternative action to be taken.**
- **The App was initially restricted to the Microsoft platform which restricted its use we have now got it expanded to the Android platform for wider coverage**

Inputting the Information



The operative launches the App and scans the QR code or RFID tags. Once both signs have been logged the Operative moves to next screen. The Operative inputs the duration and location of the works.

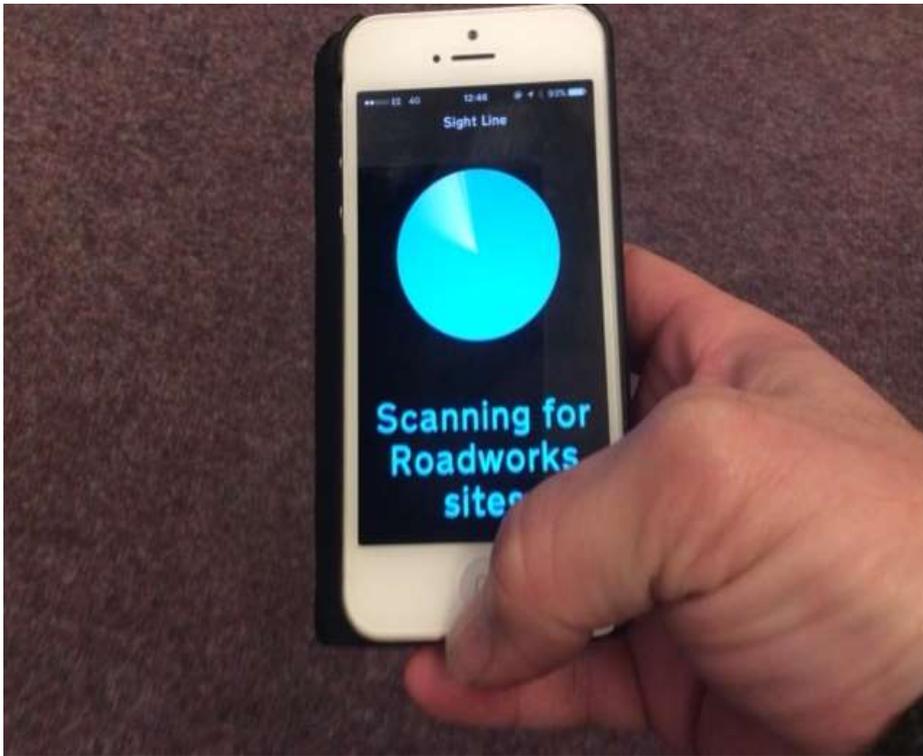
Inputting the Information



The Operative inputs the type of footway or carriageway obstruction by choosing from a list.

The site details that have been logged to the cloud can be viewed.

The Sightline App



The Visually Impaired user will have the App running in the background while walking along the street.

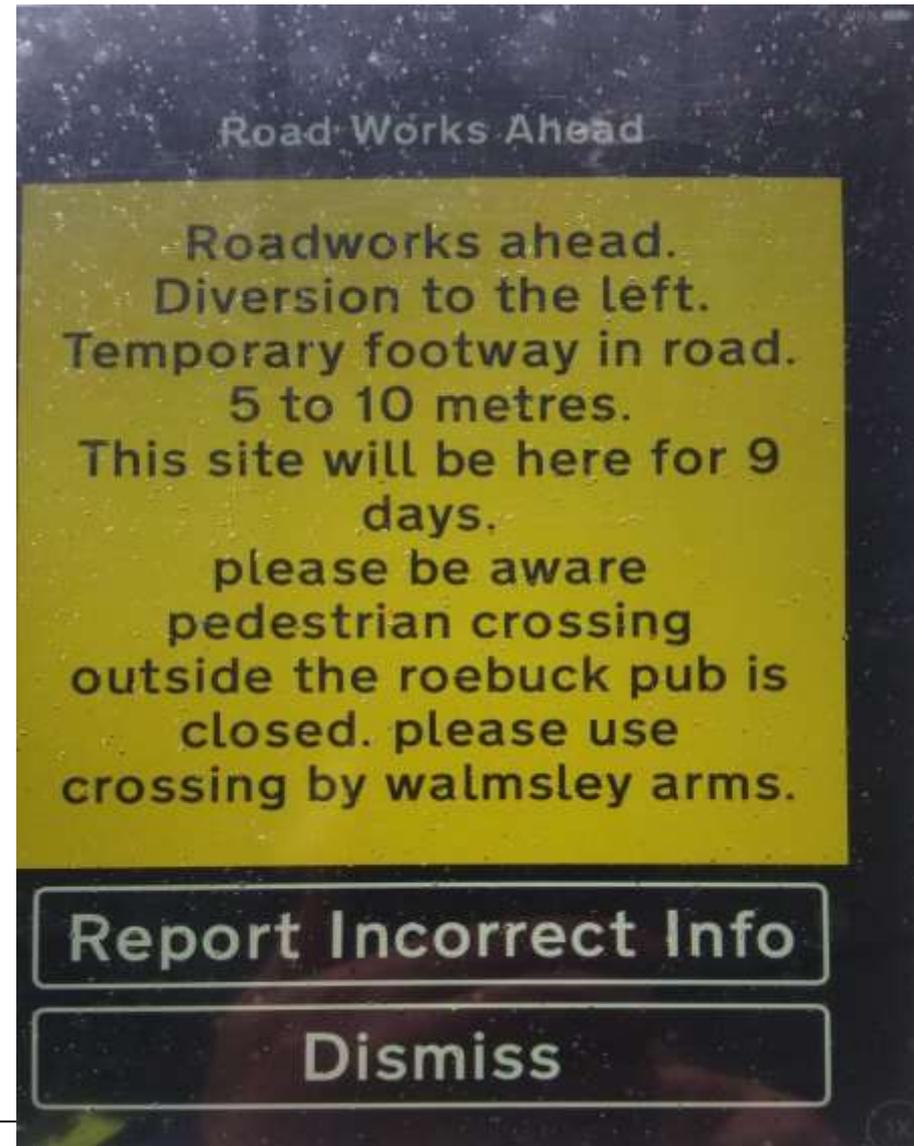
Benefits

- **Reduction in MOP related incidents in particular those involving the visually impaired.**
- **Inform the Visually Impaired of the work site on approach.**
- **Give the user relevant information on type of obstruction inc direction of walkway, length of site and expected duration of the works.**
- **Standardised equipment on site.**
- **Reduction in customer complaints and enquiries.**
- **Notification of Pedestrian Walkways/Bus stop closures/Pelican crossing closures etc**

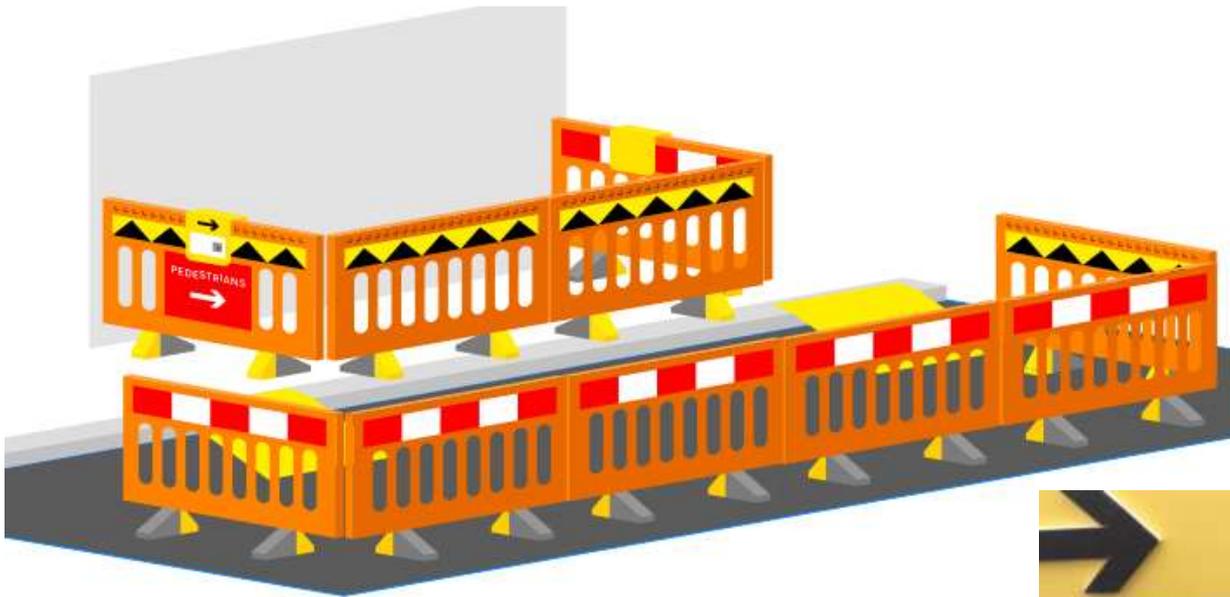
Screenshot of the App message



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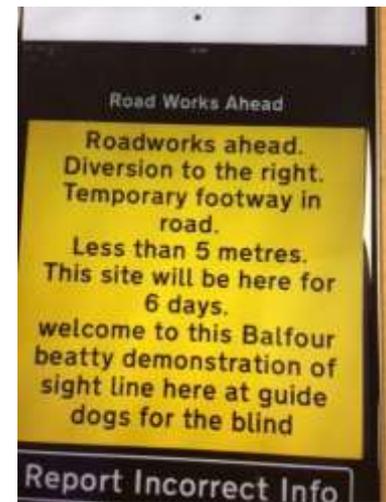
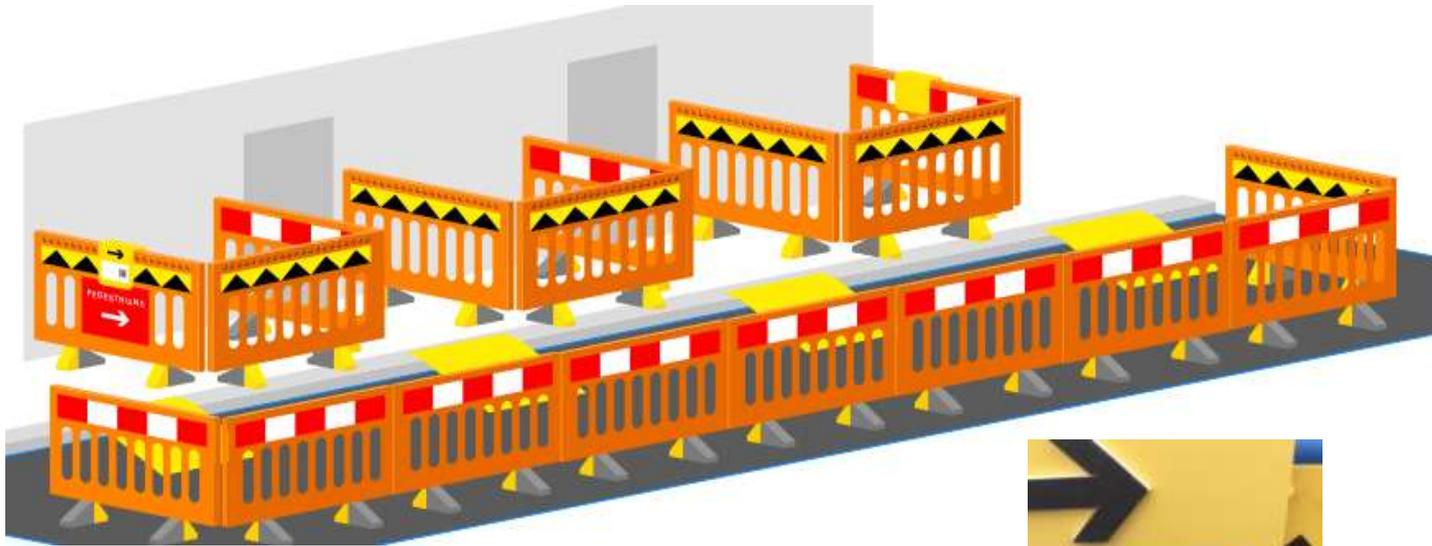


Pedestrian Diversion Beacons



Where pedestrians are expected to divert around the works site the appropriate yellow sign with an arrow should be deployed.

Multiple excavations



Where access is maintained to entrances within a works site, tactile arrow or cross signs should only be used at the start and end of the works as shown here.

Footway Closed Beacons

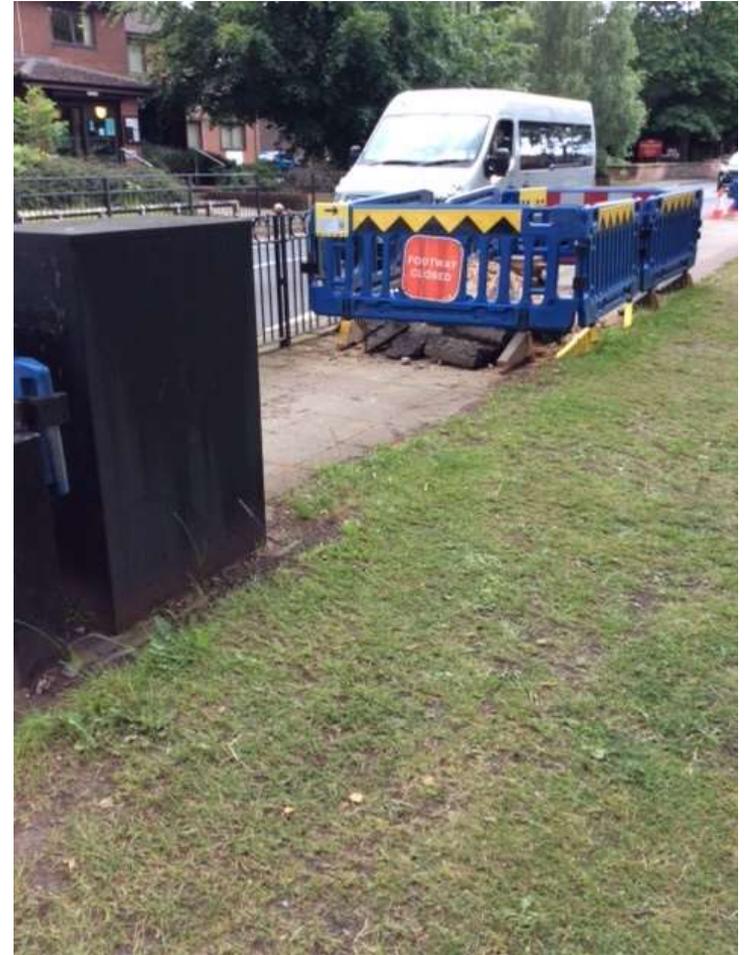


Where the footway is closed the red book requires:
'Footway closed' sign at the works and an advance 'Footway closed ahead' sign at a location where it is safe for people to cross the road

Gt Clowes Street, Manchester



Walmley Rd, Sutton Coldfield



High Street, Rishton. Lancashire



Errwood Rd, Manchester



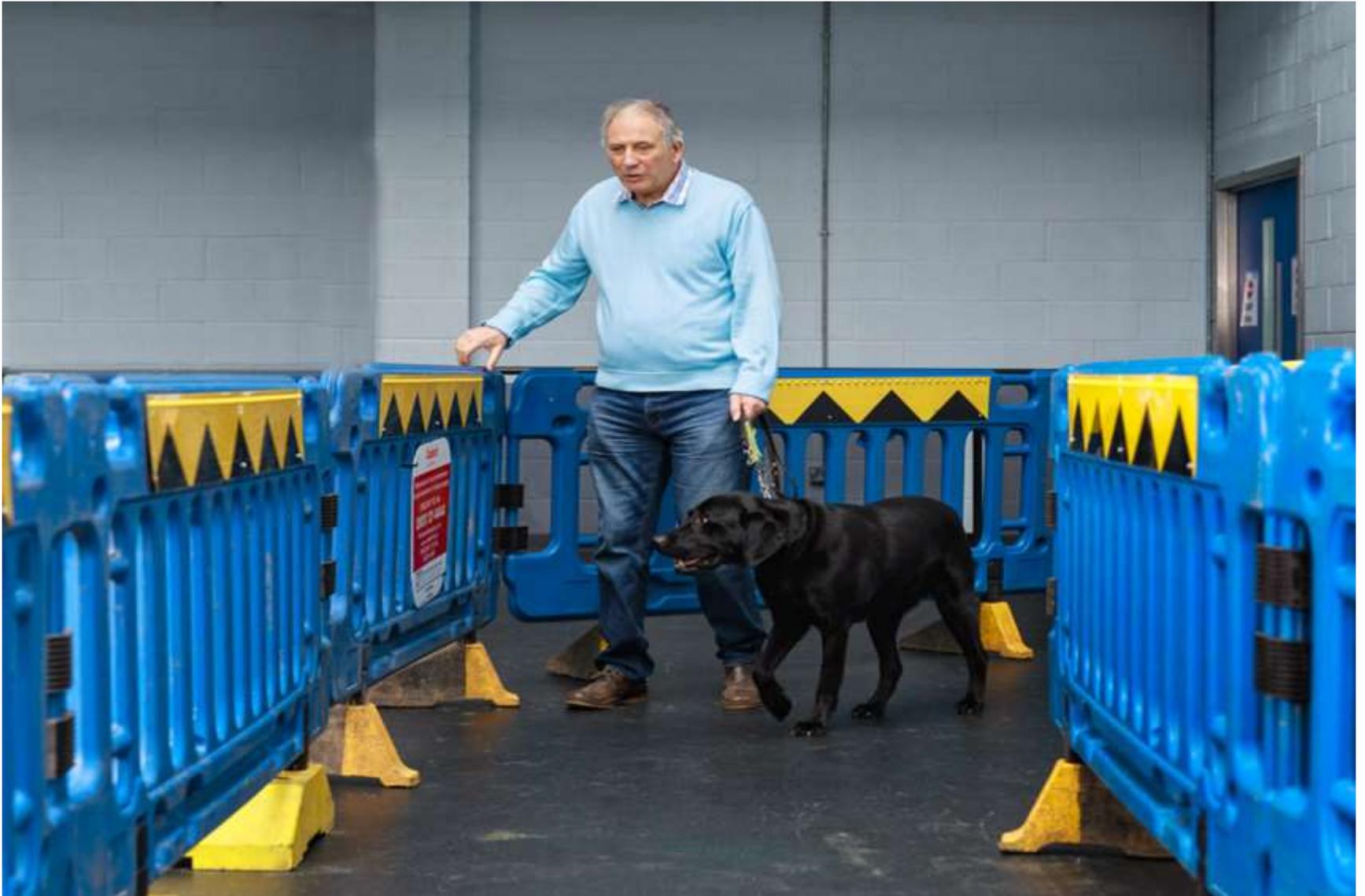
Engagement – Highway Authorities



Engagement – Guide Dogs Centre



Engagement – Guide Dogs Centre



Engagement – Guide Dogs Centre



The End.

Any Questions?