Transport Scotland

Research about kerbs

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What kind of research did we do and what is it for?

Research means getting **data** - facts, figures and information about something.

A **kerb** separates areas that are used for by different things, like separating walking and cycling, or walking and cars.

This research was called The Inclusive Kerbs Phase 4 research project.

Inclusive kerbs means kerbs that can be used by anyone.

In this project different kerbs were tried out in a laboratory by people with different disabilities.

This helped us to understand how disabled people dealt with the different kinds of kerbs.

Transport Scotland asked for the research to be done for:

- the Scottish Road Research Board
- and the Department for Transport

There are 4 phases or parts of the research.

Phases 1, 2 and 3 have already happened.

- **Phase 1**

Looked at research and found that there are not many studies about inclusive kerbs that look at:

  - **engineering** – how they are designed, tested and built
  - how people use them

- **Phase 2**

People were interviewed online to learn how they use kerbs.

The research looked at how kerbs are used for moving along a street and for crossing a street.

- **Phase 3**

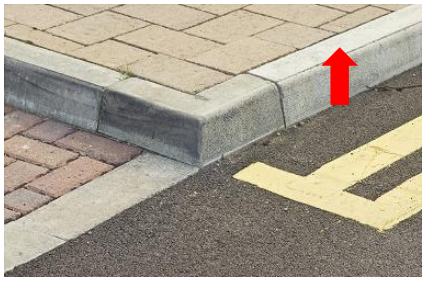
People were interviewed online and there were 3 kerb site visits with 11 volunteers with moderate to severe disabilities.

The information that was gathered was compared against the online interviews and Phase 2 site surveys to see what things were the same.

- **Phase 4**

15 people tried:

- different kerb types
- **upstand heights** that are most found in standards



An **upstand height** is the part of the kerb that is raised above the road.

The Phase 4 study wants to:

- help people understand how kerb design affects people and how they move around
- provide information for developing new standards about kerb upstand in Scotland and the UK

The study does not want to change current standards or guidance about the design of dropped kerbs or crossing points.

How did we get information?

Phase 4 was done in a laboratory using a platform that could change height and have different kerbs.

We wanted to find what kerb upstand heights could be used by everyone.

5 groups took part:

- people with low vision – like people using a cane or who had a guide dog

- people with moderate vision who had eye conditions like retinal and macular degeneration

- people who found it difficult to move around physically – like wheelchair users

- people who found it a bit difficult to move around physically – like people who use a walking stick

- people with no disability that affected their sight or movement

People were asked to:

- use 4 kerbs with different upstand heights
- describe their thoughts before, during, and after using the kerbs

People were asked to score the **workload rating** – the effort needed to go up or down the kerb.

We recorded each participant's experience and their answers to questions as they tried the different kerbs.

What did we find out?

Workload ratings were a mix of physical and mental effort.

When it was physically harder for someone, they said it was also mentally harder.

- **20 to 25 mm kerbs**

Participants who found it a bit difficult to move around:

- could see and use these kerbs easily
- found them harder to use than kerbs with higher upstands

Sometimes these kerbs were not noticed by guide dogs when the person stepped down off a kerb.

- **50 to 60 mm kerbs**

These could not be used by wheelchair users without a third wheel on the chair or someone to help.

They could be seen and used by Low and Moderate Vision participants.

- **60mm kerbs**

People with low vision found these kerbs easiest to use.

If scores from both Low Vision and Moderate Vision groups are added together, the 50mm kerbs were preferred.

- **100mm kerbs**

All groups found these kerbs hard and frustrating.

What did we find out?

The findings from Phase 4 showed the people with visual impairments and people with physical impairments liked different kinds of kerbs.

The best kerb upstand height for both user groups was between 40mm and 50mm.

We need more research and evidence before standards and guidance are made.