active disability ireland

Inclusive Design for Outdoor Recreation

Factsheet 2

Self-Assessment Audit Tools and Techniques

This fact-sheet has been developed to support application of the Self Assessment Checklist provided with the document 'Great Outdoors, A guide for Accessibility'. Undertaking a self-assessment audit is the first step in assessing your outdoor amenity / facility prior to compiling an Access Improvement Plan in collaboration with stakeholder groups. This fact-sheet will outline the tools that can be used to audit and some useful audit techniques. This fact-sheet should be read in conjunction with **Inclusive Design for Outdoor Recreation Factsheet 1 – Carrying out a Self-Assessment Audit.**

Auditing Tools

The auditing tools and techniques listed in this fact-sheet will assist you in carrying out an effective audit of your site and enable you to measure distance, slope, surface suitability, and the resistance of features at your amenity so that the these characteristics can be recorded.

Auditing Equipment

Minimum required:

- A clipboard, a printed copy of the Self Assessment Checklist, spare paper.
- A 5 meter measuring tape
- A simple Inclinometer

Additonal useful items:

- Charged smart phone
- A map of the trail to relate notes to relevant points
- Fish Scale
- 1500mm and 1800mm diameter flexible circle
- Measuring wheel (optional)

Self–Assessment Audit Tools and Techniques

Measuring Distance

A tape measure is used to measure short distances such as the widths of trails, access-ways, or gaps, or the size of accessible parking spaces.

The easiest way to measure longer distances is to use a measuring wheel. These are inexpensive online or may be borrowed to save cost. The most cost effective way to approximately measure a finite distances however is to pace the distance having calibrated your pace relative to a unit of distance, as described below.

Distance: Pacing Calculation

Step 1: Measure and mark out 15m on the ground.

Step 2: Starting with your feet behind the zero point, walk your normal natural pace along the line, counting at every second step. Include an approximate measurement of the distance left over at the end of your pacing expressed as a fraction of your two steps.

Step 3: Divide 15m by the number counted.

Example:

> You have counted to 20 (counting every second step)
> 15m / no of paces = your pace in meters
> 15m/20 = 0.75m

You now know your full two-step pace measures 0.75 meters so you can take approximate measurements using your pace as a unit of measurement. For longer distances over a trail, it can be useful to record the distance using a trails app, there are many available.

Assessing surface suitability

If you dig your heal into the ground surface and shuffle it you can approximate surface accessibility. If the surface is firm and your heel makes no impact, it should be accessible generally for walking and wheelchairs. If a fine top layer of grit is displaced but the surface is firm under, this would be suitable for a challenging access route. If your heel digs in more and the surfacing builds up around it, this is less accessible and not suitable as either a multi or challenging access route. *Note: Design and specification of routes should be undertaken by professionals who will specify suitable substrates for the design loading*

Measuring slope

Ascertaining slope is important for grading the accessibility of a trail. Slope is measured using an inclinometer. You can purchase manual and digital inclinometers but the easiest way to measure slope is using a mobile phone application where you set the phone along a 600mm long batten placed on the ground.

Units of slope explained:

Slope measures the vertical rise over a distance and is normally expressed as a percentage

E.g: The ground rose 4m over a 100m distance

Rise/distance x 100/1

4/100 x 100/1 = 4%

Slope can also be expressed as a as a ratio. 4/100 = 1/25 so the slope is 1 in 25. It is useful to understand how to convert degrees to a percentage or ratio.

1. Degrees Example IF a slope measures 2.3 degrees
   Tan 2.3 = 0.04
   1/0.04 = 25
   y=25

2. Ratio 1 in y 1 in 25

3. Percentage: 100 = % 4%
   25

Measuring resistance (physical effort)

It is useful to know the resistance of push / pull effort required at any door / gate along a public access route . Best practice calls for a closing resistance of not more than 20N. *(Note: Fire door closing devises are subject to compliance with Building Regulations. If a device cannot fulfill access and fire requirements, an alternate means of door operation should be considered. Refer Building Regulation Technical Guidance Document Part M)*

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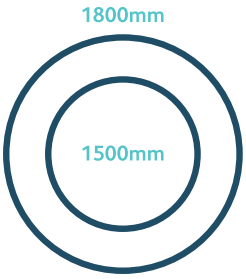
Turning circles



1500mm and 1800mm wheelchair turning circles are referred to in the guidance. It is useful to have a way of quickly checking these. A foldable disc of light canvas or plastic of the required dimensions can be placed on the ground / floor to this end. It is important to note that objects above floor level (wash hand basins etc) must not encroach on the required area.

Recording

As you are auditing, record all critical information relating it to key points on your map if necessary. Take plenty of photos as a record of your audit. If you have a smart phone, it may be useful to use a trails app to record your journey and also to upload photos at the relevant locations on your journey as you go. A plan and elevation profile will often be generated which is useful for describing the route to others.

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