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The Field Heel Test - How to Estimate the Strength of the Soil

If you are in any doubt as to how the underlying soil, where your path will be built, will perform, conduct this field heel test. The simple test will show you if the soil ‘feels’ sufficiently solid. The test involves no measuring, no math, no lab tests, and no cost. The test can be carried out in either wet or dry conditions. Soils with significant clay content tend to be soft when wet but firm when dry. The photos below show a clay loam soil. You will need a spade to carry out the test.



Step 1 With a spade remove a small patch of the top vegetation layer to expose soil layer before doing the test.



Step 2 Place the heel of one foot over the exposed soil layer without marking it.



Step 3 Thump the heel of the foot directly down into the exposed soil layer.



Step 4 Remove the heel from soil and inspect whether an imprint has been made.

Check with the table below to determine the soil hardness, recommended depth of sub base and whether or not to install geotextile between soil and path sub base layers.

Soil Hardness	Heel Test Result	Recommended Depth of Sub Base	Geotextile
Very hard	No imprint visible	50mm	No
Firm	Small imprint visible	100mm – 150mm	No
Medium	Medium imprint visible	150mm - 200mm	Yes
Soft	Large imprint visible	200mm - 300mm	Yes
Very soft	Very large imprint visible	300mm – 500mm	Yes

Important note

This factsheet has been compiled using the best information available to Paths for All at the time of publication. It is intended as a general guide to the topic and should not be viewed as a substitute for expert advice and professional guidance.

Other publications

Lowland Path Construction - A Guide to Good Practice

Published by Paths for All. Available to download from www.pathsforall.org.uk

Signage Guidance for Outdoor Access

Published by Paths for All. Available to download from www.pathsforall.org.uk

Paths for All Factsheets

5.2 Path Survey, Design and Construction - The Basics
 5.3 Health and Safety in Path Construction - An Overview
 5.4 A Guide to the Construction (Design and Management) Regulations 2007
 5.5 Dealing with Hazards and Risk Assessment
 5.6 Path Project Management
 5.7 Path Construction Project Checklist
 Available to download from www.pathsforall.org.uk

Countryside Access Design Guide

Published by Scottish Natural Heritage. Available from SNH Publications, Battleby Centre, Redgorton, Perth, PH1 3EW. (01738 444177). www.snh.gov.uk

The Fieldfare Trust - A Good Practice Guide to Countryside Access for Disabled People (Extended CD-ROM Edition 2005)

Published by the Fieldfare Trust. Available from the Fieldfare Trust, 7 Volunteer House, 69 Crossgate, Cupar, FIFE, KY15 5AS or www.fieldfare.org.uk. Priced: £51.00 (downloaded on online) or £61.20 (ordered on online).

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