

The Path Manager's Guide to Grading

Standard waymarked path grading
system for Scotland

Version 3 – January 2016

paths
for **all**

FOR A HAPPIER,
HEALTHIER SCOTLAND



Contents

Why we need a grading system	3
A Six Part System	4
1. Path Name	5
2. Path Promotion	5
3. Grade Symbol	6
4. Terrain Description	7
5. Distance	9
6. Time	9
Survey – grading a path in the field	11
Publishing and presentation tips	12
Grades can change...	13
Appendix I – Graphic design guidance	14
Appendix II - How the system was developed	16



Why we need a grading system

If you're a path manager thinking about how to grade your paths consistently and in a way that's helpful to users, then this guide is for you.

The more path managers across Scotland adopt a common approach to grading, the more path users will become familiar with the system and comfortable about making the right path choices for them. That's what we all want: to give path users confidence to get going.

There are countless ways to describe a path. But while you might think that more information is always better, research has proved that lots of information just makes decisions too daunting. This system is simple. Simple works.



What's it for:

- Clearly defined paths with wayfinding. It doesn't cater for long distance or mountain routes.
- All access takers covered by the Scottish Outdoor Access Code. Because the majority of path users are walkers, time estimates are based on walking.

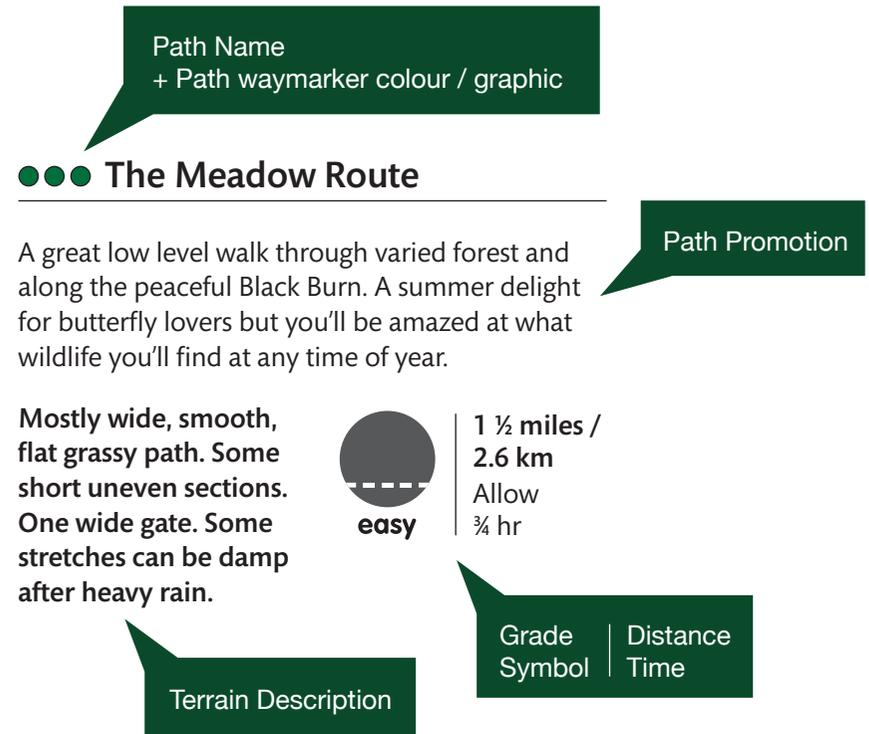
A Six Part System

The system is much more than a single grade:

1. Path Name (and waymarker colour or way-finding symbol)
2. Path Promotion
3. Grade Symbol
4. Terrain Description
5. Distance
6. Time

All six parts are vital. Different kinds of users value different elements of the system but together, the elements describe the key things people need to make good decisions. And remember: it works with users because it's simple and not too wordy.

Consistent use underpins this system so it is essential that all the elements are always used and presented in the same way, whether on a leaflet or on a panel on site:



There are more examples on page 10.

The system is designed to work without a key or the need to present grade specifications alongside.

1. Path Name

Names are important. Less frequent path users will be particularly influenced by the path name in making their choice. Names help with motivation e.g. “The waterfall path”.

Alongside the Path Name, you will normally show the waymarker symbol (or colour) to be followed on the ground.



2. Path Promotion

What's special about this path? This is your opportunity to sell the experience.

The Path Promotion text should be easy to understand and focus on the user experience, such as highlights of the route, rest points to enjoy the view etc. It's a sales-pitch though, not a blow-by-blow account. Be very concise – **Maximum 40 words** and half this if you're writing for the web.

Further interpretive text, for example expanding on history of the area, would not be included here but rather in a separate section of the leaflet, panel, website etc.

3. Grade Symbol

There are basically three main grades: **Easy / Moderate / Strenuous**. The Easy paths that also meet the Countryside For All access standards are just a variant of Easy. Grade specifications are set out in the table below:

	Gradient & duration	Surface materials / Surface condition	Obstacles	Usable Width	Distance limits
 easy	[Easy + meets Countryside For All Access Standards] See Countryside For All Access Standards - http://www.fieldfare.org.uk/?page_id=48				
 easy	Maximum 12%, except for short ramps (<10m) up to 20%.	Generally a smooth, firm surface. Well drained and maintained with minimal loose material.	Minimal use of steps. Free of narrow gates or gaps (<800mm) and always itemised in Terrain Description.	Generally 1000 mm. Short sections (<20 m) down to 800 mm.	Total distance of whole route must not exceed 5 miles / 8 km (return route to start point).
 moderate	May exceed 12% for infrequent short sections (<200 m) but generally no steeper than 12%.	Earth, grass or stone surface. Sections may be firm under foot. Generally well maintained but sections could be loose or uneven (<50 mm height of roughness) or soft after rain.	Few obstacles. Sections of regular steps, gates and other minor obstacles mentioned in the Terrain Description.	Variable, largely 800 mm but with some narrower sections.	Total distance of whole route must not exceed 7 miles / 11 km (return route to start point).
 strenuous	May have arduous climbs and steep sections. May include long steep sections exceeding 12%.	A distinct surface but could be without major change to the existing ground. Could be rough and rocky. May have muddy sections.	Natural and other obstacles are likely including large or irregular steps, stiles or gates.	Frequently less than 800 mm.	Total distance may be greater than 7 miles / 11 km.

The grade symbols are the graphic shape and the grade word combined, e.g. the circle graphic and “easy” should always be used as one. For graphic design guidance – see Appendix I (page 14).

4. Terrain Description

The Terrain Description and the Grade Symbol work together - helping users choose the path that's right for them. The Terrain Description is at least as important as the overall Grade. Survey the path to establish the standard terms for the description and then write it up as one to three short sentences with a total maximum of 30 words (see over the page for the standard terms).

Easy grade example:

Mostly wide, smooth, flat grassy path. Some short uneven sections. One wide gate. Some stretches can be damp after heavy rain.

Moderate grade example:

Short, moderate slopes. Mostly a smooth, narrow earthy path with some uneven sections which can be a bit muddy after rain. Includes a bridge with a short flight of steps.

[This description is exactly 30 words – the maximum]

Paths are varied. It's impossible to describe every condition of every section in up to 30 words. Try to give an impression of the overall terrain, while also covering the unusual sections or obstacles that might be a problem for some users.

Easy and moderate paths are more likely to be used by visitors with mobility difficulties, so make sure you've mentioned the most difficult sections or any particular barriers, to avoid any nasty surprises. It's not a good idea to tell user groups what they can and can't do. The Terrain Description is there to help users make their own decisions.

Use every day terms like grassy instead of say, vegetation. And expect to have to edit down to the 30 word limit!

Just as for the Grade Symbol, it's important to use terrain terms consistently.

Gradient

Slope

flat	path must actually be flat with no inclines greater than 2%
gentle	slopes between 2% and 5%
moderate	slopes between 5% and 12%
fairly steep	slopes between 12% and 20%
steep	slopes greater than 20%

Slope duration

short	gradient of up to 50 m duration
long	gradient of more than 200 m but less than 400 m duration
long for ... m	where the slope is for 400 m or longer, the distance must be stated

Obstacles

for example

- Steps (long flight / short flight)
- Gates (wide, narrow kissing...)
- Stiles
- Bridges
- Boardwalk
- Cattle Grids
- Public road crossings

Surface

Surface material

Grassy, Earthy Sandy	more "natural" path surfaces
Gravel	most aggregates even if the particle size is technically out of the range of gravel
Tarmac	
Rocky	this could include rock steps or pitching

Surface condition

Smooth	compacted aggregate or bound surfaces with no protrusions or loose stones greater than 10mm
Loose	material not compacted or has no fines
Firm	compacted surfaces
Uneven	minor variability in the level of the surface, including cross-slopes (< 50 mm of height roughness or rockiness)
Rough	>50 mm roughness. May have loose stones or tree roots
Often or usually: wet / muddy / boggy / dry	If helpful to route choice

Width

Narrow:	the managed width is less than 800 mm wide
Wide:	the managed width is greater than 1500 mm
Over-grown:	hanging or encroaching vegetation

5. Distance

Everyone's got their own view on metric verses imperial measurement. Path users prefer different things too. This system uses the following conventions:

Miles first, rounded to the nearest ¼ mile and expressed as fractions

Kilometres, rounded to the nearest 0.1 km and expressed in decimals e.g. 3 ½ miles / 5.6 km

Where a path is under ¼ mile (400m), we recommend just showing distance in metres with no imperial equivalent.

6. Time

Time estimates are based on walking as that's generally the largest user group for any path. We recommend the following guide time conventions as a start point for your time estimates. Times should be based on actually walking (rather than including long breaks) but at a sociable, relaxed pace:

- **Easy paths** **30 minutes per mile**
- **Moderate paths** **35 minutes per mile**
- **Strenuous paths** **40 minutes per mile**

Express times as fractions of an hour, rounded to the nearest half an hour. Round to the nearest quarter of an hour for paths that are going to take less than an hour.

We display times as fractions of an hour rather than minutes to help suggest that these are estimates rather than precise timings. Examples:

	1 mile	2 miles	3 miles	4 miles	5 miles
Easy	½ hr	1 hr	1 ½ hrs	2 hrs	2 ½ hrs
Moderate	¾ hr	1 hr	2 hrs	2 ½ hrs	3 hrs
Strenuous	¾ hr	1 ½ hrs	2 hrs	2 ½ hrs	3 ½ hrs

(rounded up to quarter hours for short paths, half hours for longer routes)

Examples:

●●● The Beach Path

The easiest waymarked route, this path meanders through great old pines to the Loch and its golden beach.

Wide and flat with a smooth, firm surface. No gates or steps.



1 mile / 1.6 kms
Allow ½ hr

●●● Twin Lochans Trail

Discover two secret lochans in this magical Scots pinewood. Continually interesting and some great views. The longest trail here but sharing its start with the shorter Pine Tree Trail, you can see how you feel when the routes divide.

Short, moderate slopes. Mostly a smooth, narrow earthy path with some uneven sections which can be a bit muddy after rain. Includes a bridge with a short flight of steps.



3 miles / 4.8 km
Allow 2 hrs

●●● The Meadow Route

A great low level walk through varied forest and along the peaceful Black Burn. A summer delight for butterfly lovers but you'll be amazed at what wildlife you'll find at any time of year.

Mostly wide, smooth, flat grassy path. Some short uneven sections. One wide gate. Some stretches can be damp after heavy rain.



1 ½ miles / 2.6 km
Allow ¾ hr

●●● Millstone Hill

Climb Millstone Hill through the rich pine forest for wonderful views of Bennachie.

Long sections of steep climbing with some steps. Narrow kissing gates. Varied surfaces, some narrow, rough and rocky but usually dry.



3 ½ miles / 5.6 km
Allow 2 ½ hrs

Survey – grading a path in the field

The system has been designed to be simple and quick to do a survey. If it's taking you more than twice as long as it would take to walk the path normally then you're probably being too detailed.

Remember that you're grading against two things as you go:

1. The Terrain Description terms
2. The overall Grade for the trail

All you'll need is a clinometer and a tape. You may think you can judge the gradient of a slope by sight alone, but even the most experienced path surveyors will get it wrong. Use a clinometer (or clinometer phone app or gradlevel) and **check you know how to use it.**



Conversion table:

%	Degrees	
2	1.2	1:50
5	3	1:20
12	7	1:8
20	11	1:5

Publishing and presentation tips

- If you've got a range of different graded paths on offer at a site, list paths in order of grade, with Easy paths first. Where possible, the shortest path should also be the easiest; that's what users tend to expect.
- Coloured waymarking can be confusing. Although colour is not part of this grading system, if you've used different colours for your waymarking system, some users may still think colour relates to grade. It's a good idea then to work with the users, rather than against them, by assigning colour waymarking in order of difficulty for your paths: green for the easiest and red and black for the most difficult.
- Colour and contrast. People with colour blindness can find it difficult to distinguish black-red and green-red combinations. Take care that there is a good difference in brightness between these colours when they are used as foreground/background combinations.
- See Appendix I for graphic design guidance.

Maps and on-site panels

Do think carefully about using maps on information panels. We want people to engage with the grading information first, when making path choices. When a map is too dominant, users are first drawn to the map and may not then fully read the grading information.

Using the system in other formats and online

The system works well in print (leaflets) or information panels or in websites. The presentation and organisation of the elements should stay the same.

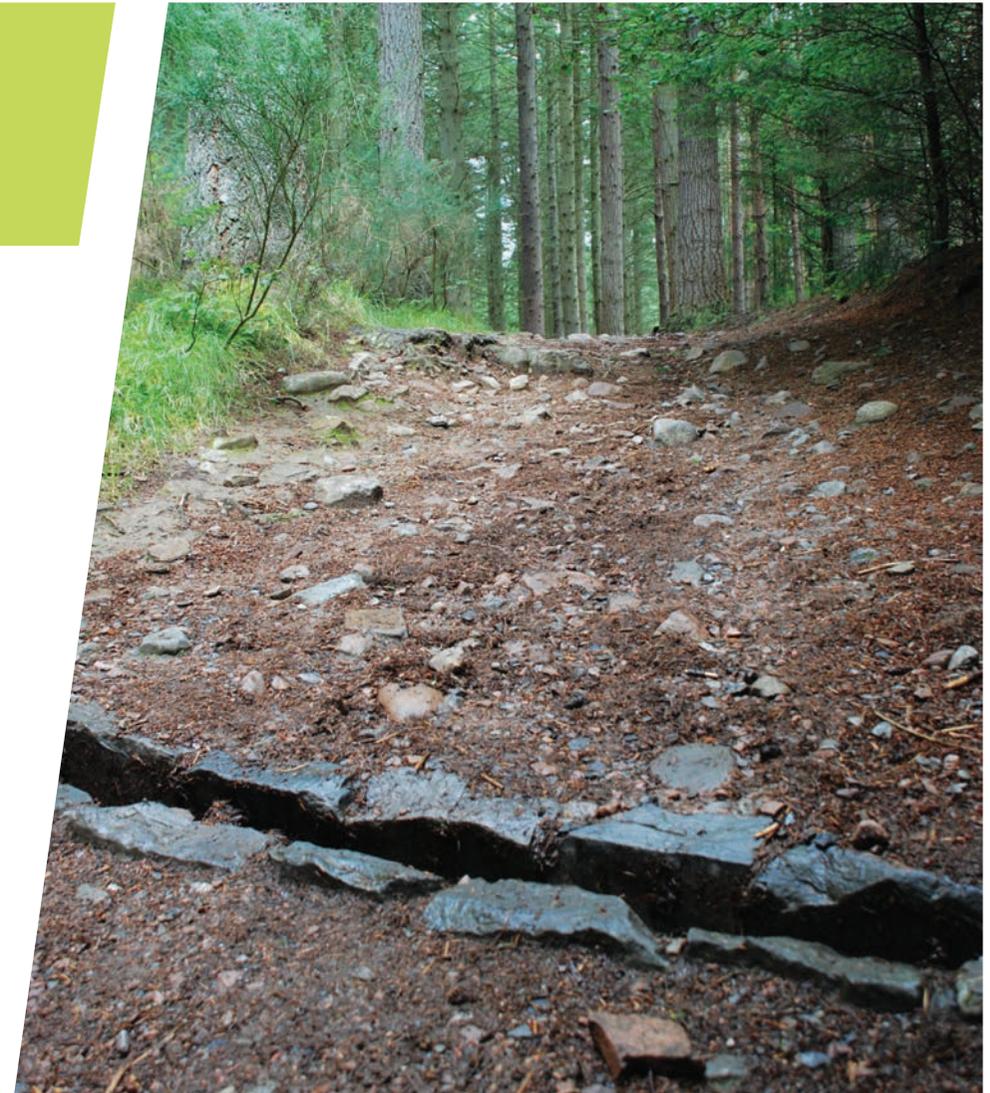
Presenting material online gives you more options but do remember that we generally scan more and read less online, so your Path Promotions need to be particularly concise. It's really important that the relationship between the Grade Symbol and the Terrain Description is maintained whatever the media. Users will scan the Grade Symbol and then need to be able to relate to the qualifying information in the Terrain Description quickly.

Grades can change...

It's an obvious thing to say but if things change on a path, the overall Grade or the Terrain Description can become inaccurate.

Path surfaces deteriorate at different rates. Maintenance work can ensure that a path continues at the grade it was designed to. Does your inspection regime allow for review of Grade and Terrain Description?

If you need to close a section and temporarily divert a path, is the diversion different? Do you need to advise users of any temporary change in Grade or Terrain Description?



Appendix I – Graphic design guidance

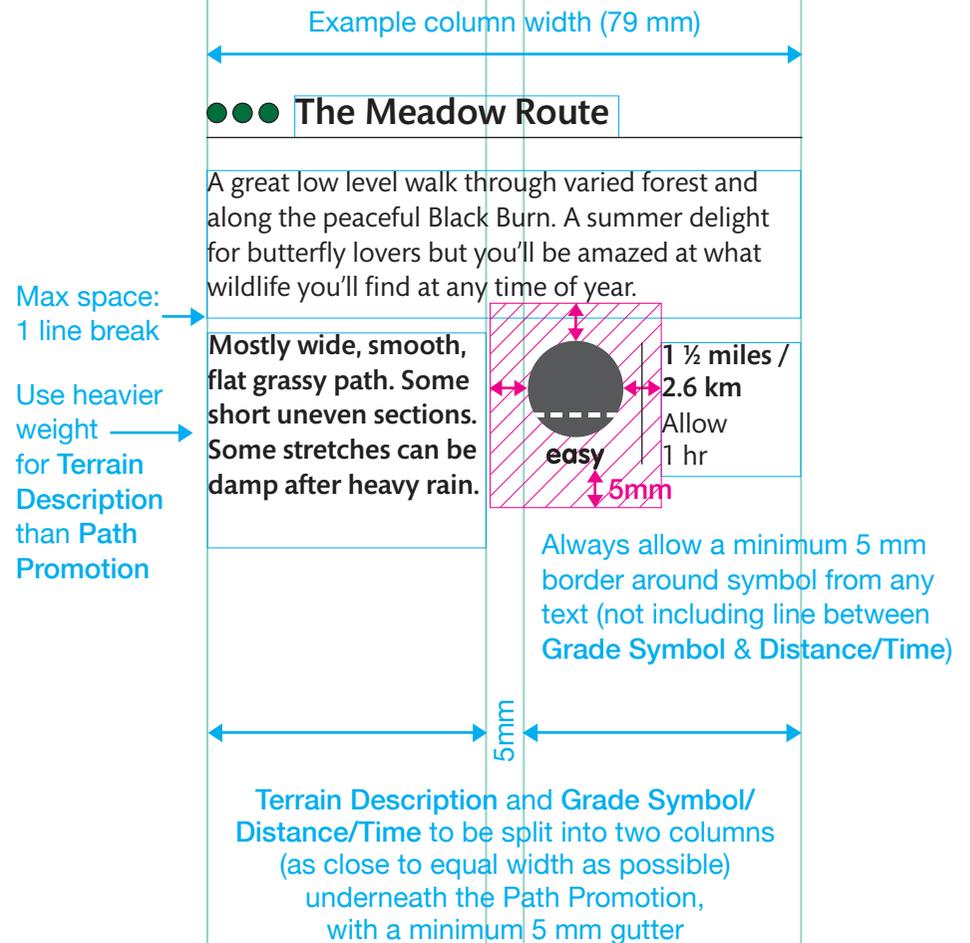
The system has been designed to be as easy to use as possible. However some basic design guidelines should be followed.

The example on the right shows the main design principles. Careful consideration should be given to the use of typeface. Try to use fonts that are narrower and take up less room such as Mundo Sans, Myriad Pro or Helvetica Neue.

Below the **Path Promotion** there are two equal columns: the first for the **Terrain Description** and the second, for the **Grade Symbol, Distance and Time**. No text should stray into the 5 mm area around the **Grade Symbol**.

There are a few more examples of how to use the system on the following page.

Example using typeface: Mundo Sans



Example using moderate grade with a longer Terrain Description

●●● Twin Lochans Trail

Discover two secret lochans in this magical Scots pinewood. Continually interesting and some great views. The longest trail here but sharing its start with the shorter Pine Tree Trail, you can see how you feel when the routes divide.

Short, moderate slopes. Mostly a smooth, narrow earthy path with some uneven sections which can be a bit muddy after rain. Includes a bridge with a short flight of steps.



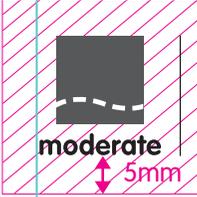
moderate | **3 miles / 4.8 km**
Allow 2 hrs

Always try to keep the Terrain Description within the left hand column

●●● Twin Lochans Trail

Discover two secret lochans in this magical Scots pinewood. Continually interesting and some great views. The longest trail here but sharing its start with the shorter Pine Tree Trail, you can see how you feel when the routes divide.

Short, moderate slopes. Mostly a smooth, narrow earthy path with some uneven sections which can be a bit muddy after rain. Includes a bridge with a short flight of steps.



moderate | **3 miles / 4.8 km**
Allow 2 hrs

If short of space and text really needs to be wrapped underneath, make sure the minimum 5 mm space is left below the Grade Symbol

Try to avoid long single lines of text by dropping words down to the next line

Grade Symbol

The symbols should never be separated from the grade word and used alone. Minimum sizes for print, information panels and web are shown below.

Please note: The Grade Symbols are set up to be used at 100% minimum size on panels and at 50% for print when importing into programs such as InDesign/Quark Xpress. They are scaled within a 72mm sq pixel area for web.

			
easy	easy	moderate	strenuous
Minimum width: Print: 14.5 mm Panel: 29 mm Web: 72 pixels	Minimum width: Print: 12.5 mm Panel: 25 mm Web: 72 pixels	Minimum width: Print: 16 mm Panel: 32 mm Web: 72 pixels	Minimum width: Print: 16 mm Panel: 32 mm Web: 72 pixels

Using the symbols on a white background works best, but most light backgrounds are also ok.

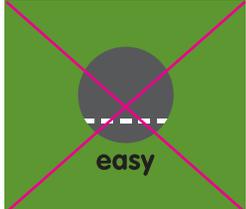


easy



easy

The symbols are not designed to be used on dark backgrounds.



easy

[Click here](#) to access the Grade Symbol artwork files

Appendix II - How the system was developed

Agencies involved in path provision across Scotland identified a need for a new, effective path grading system for the full range of access takers covered by Scottish access legislation (walkers, cyclists, riders etc). A key objective was to encourage more people to use paths by helping users to be confident in choosing the right path for them.

Over 2009-10, SNH and agency partners, conducted research into path attribute information: (Walking-the-Talk (2010). Research into the Provision of Path Attribute Information. SNH Commissioned Report 442.

This work provided a useful study of the challenge and parameters of path attributes but not a finished, adoptable system for users.

On behalf of the original partners, Forestry Commission Scotland (FCS) then led the development of a simplified system, derived from the initial research. Finally, key partners: SNH, Paths for All (PfA) and FCS, user-tested the proposed system, through behavioural psychology consultants, Brainbox. This work, including extensive fieldwork, provided in-depth insight into decision processes of path users and non users and endorsed the system as having met the partner's objectives with only minor amendments.

SNH, FCS and PfA subsequently worked together to prepare this guide for path managers, using the system as developed and building in the recommendations from the Brainbox user testing.

We hope you find this guide useful.



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Scottish Natural Heritage
Dualchas Nàdair na h-Alba

All of nature for all of Scotland
Nàdar air fad airson Alba air fad



Forestry Commission Scotland
Coimisean na Coilltearachd Alba

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