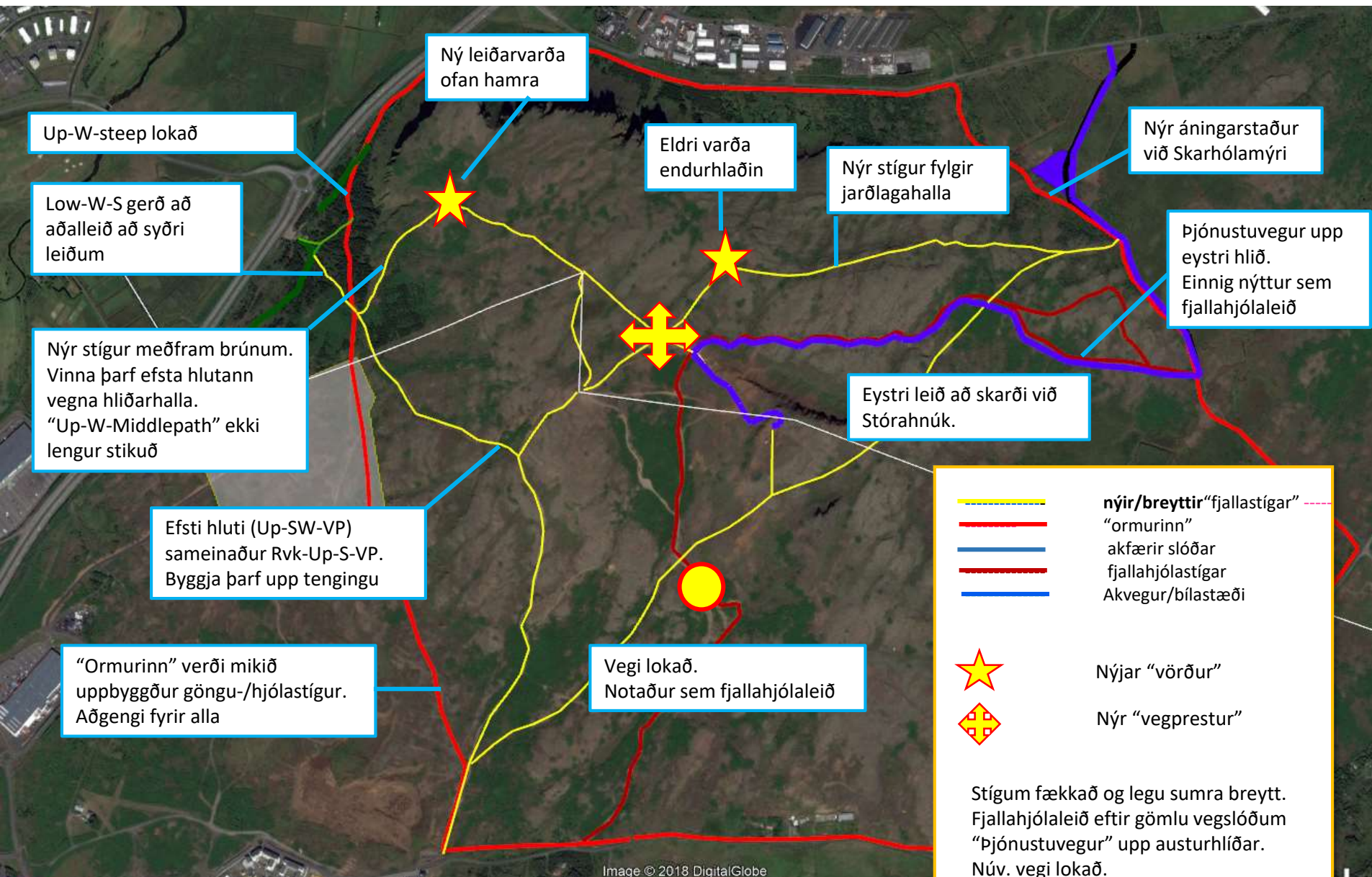


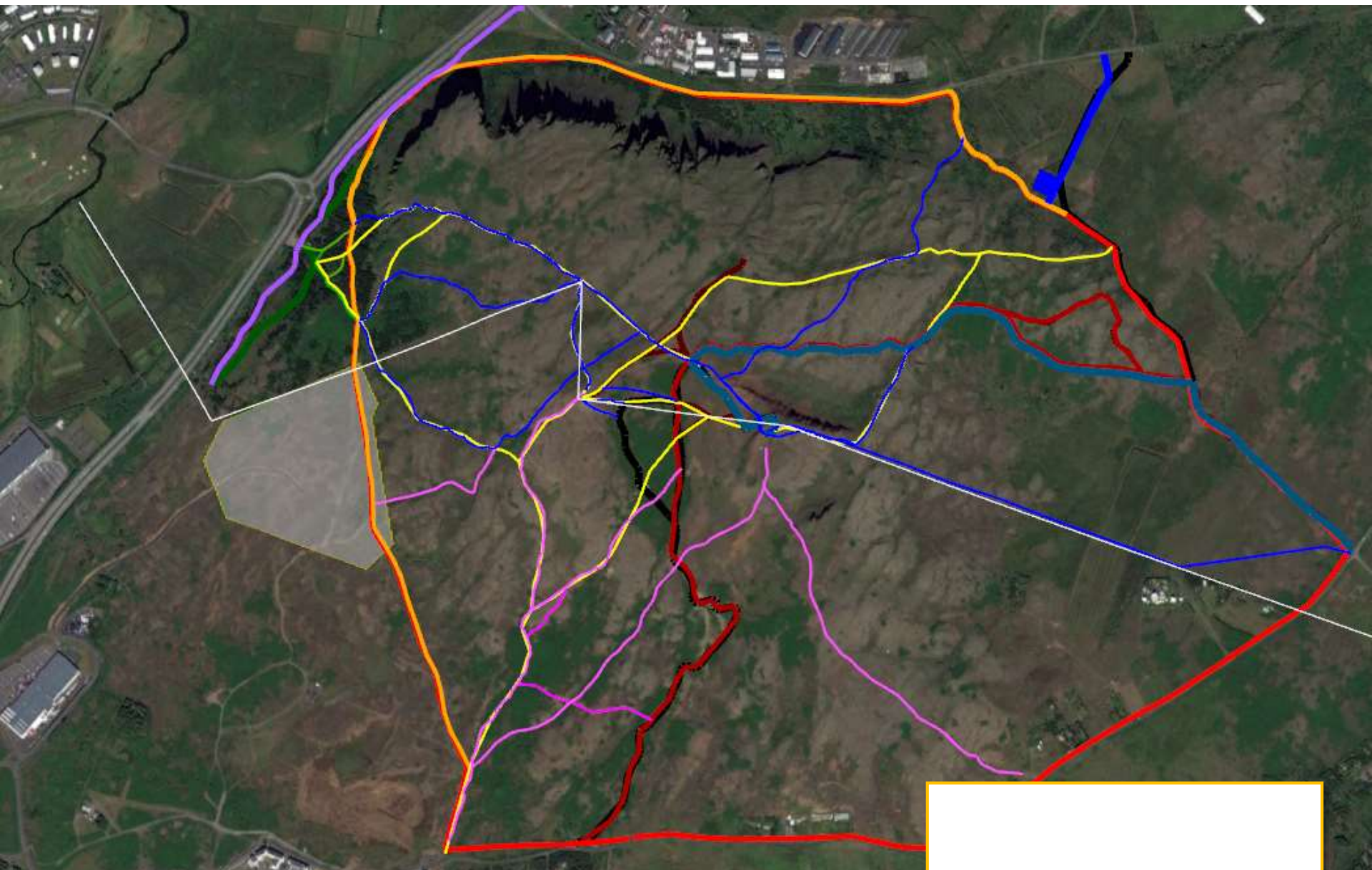
Úlfarsfell – Tillaga 1

Teikn: Örn Þór Halldórsson



Úlfarsfell – Tillaga 2

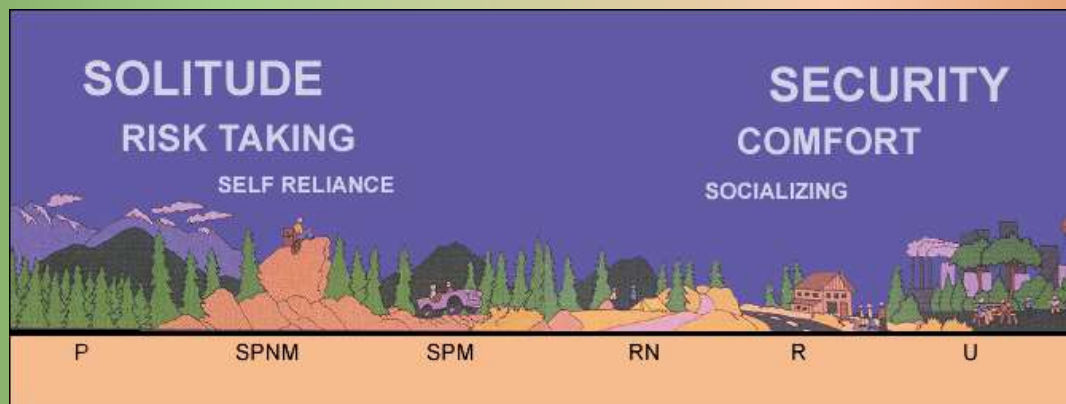
Teikn: Örn Þór Halldórsson



Úlfarsfell – Núverandi stígar og Tillaga 1

Örn Þór Halldórsson

Recreational Opportunity Spectrum (ROS)



Purist



Urbanist

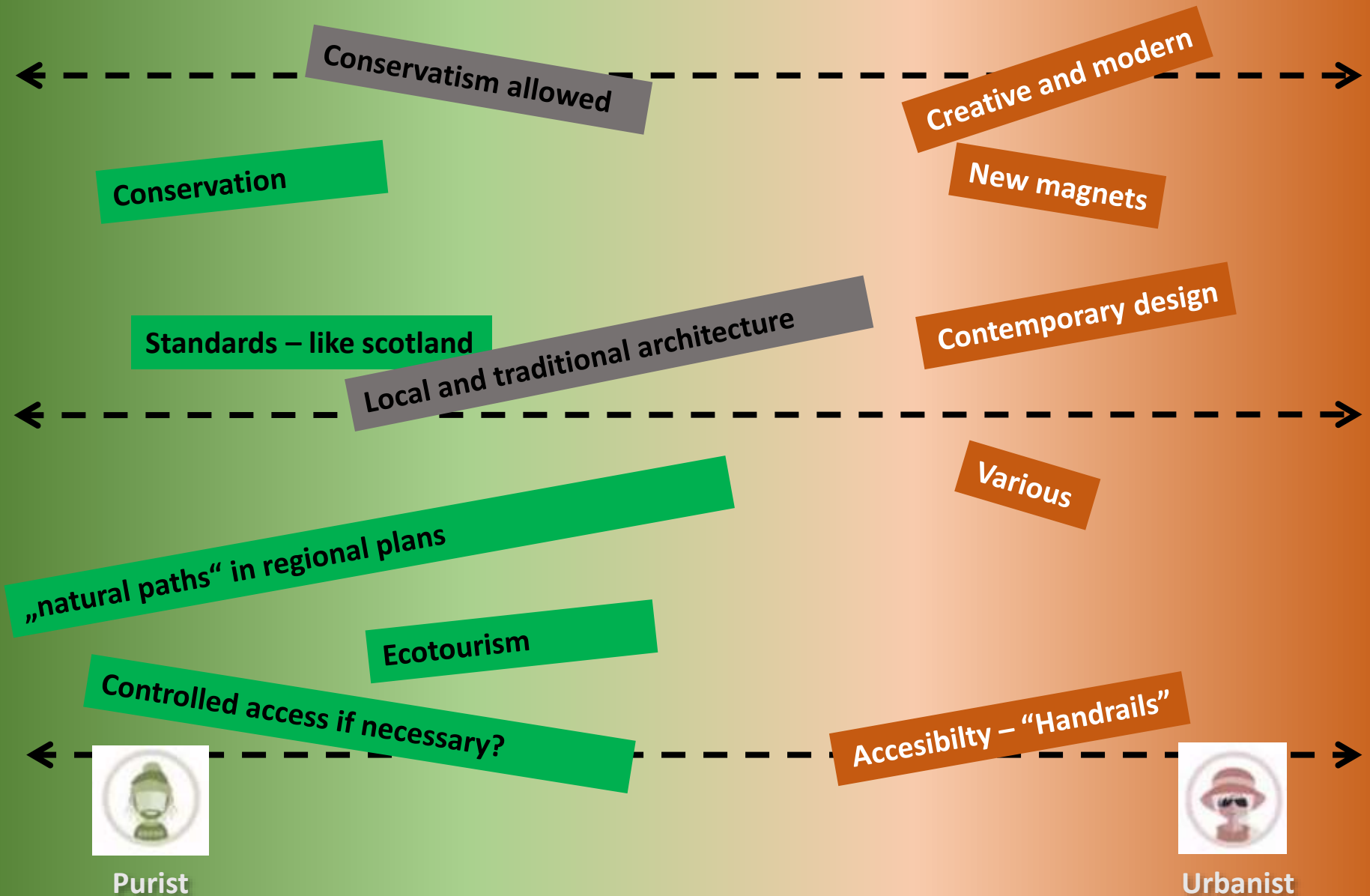
Recreational Opportunity Spectrum (ROS) – and infrastructure



Purist

Urbanist

Recreational Opportunity Spectrum (ROS) – and planning in Iceland



USER GROUPS

Pedestrians

1. The less able
2. Casual trail users
3. Leisure / occasional walkers
4. Ramblers
5. Trail runners
6. Hill walkers and fell runners

Off road cyclists

Equestrian users

The Less Able

Users who prefer trails that are accessible to all, or access to trails is limited or constrained by physical or mental issues.

- People with limited or no navigational or map reading skills
- People with limited levels of confidence in terms of accessing the countryside
- People with limited physical mobility
- People with impaired vision
- People with learning difficulties
- Elderly people
- Very young children

Trails should be genuinely accessible to all users including people using wheelchairs and children in buggies.

Even, stable and consistent surfaces, not less than 1500mm wide to enable users to move along the trail side by side.

This may be essential in enabling certain users to use the trail, for example where a trail user needs a carer to walk alongside them or they need a guide dog. Gradient not more than 5% throughout and the trail should not include any features such as steps, level changes, dips or mounds.

Trails should fit within Category 1 and the most suitable trail model is a prescribed route of some kind (preferably circular) with supporting facilities such as toilets and easy access parking.

Trails with little or no elevation change or largely flat and which are obvious and easy to follow throughout.



Casual Trail Users

A diverse group and most likely the single largest pedestrian user group.

All ages and abilities / low key informal recreation in settings such as urban parks, country parks, forests and woodlands. :

- Limited or no navigational skills
 - Low levels of confidence in terms of accessing trails and the countryside
 - If using social trail networks they are most likely to use trails that are known to them and close to home
 - Most likely to use prescribed trails in other settings
 - Low levels of fitness
-
- Dog walkers
 - Joggers
 - Families with young children
 - People of all ages including young children and the elderly

This cohort use a range of trail types including forest roads and tracks, farm tracks, public rights of way and prescribed trails.

They require trails of between Category 1 and 3 and generally do routes of between 30 minutes and 1 hour duration and are very likely to do the same routes on a regular basis (particularly dog walkers).

This cohort are most likely to do routes that do not involve significant elevation change and will use social trail networks that they are familiar with close to home, and prescribed routes in areas that they are not familiar with. As outlined above, this group is characterized as having low levels of confidence and skill in the outdoors and are therefore most likely to use routes that are either well known to them or routes that are prescribed and waymarked in some way. Crucially, this cohort requires trails that are obvious on the ground and easy to follow and therefore by and large require trails with some formal built structure.

Leisure Walkers and/or Occasional Walkers

This is a very large cohort and is essentially those people that are not committed or hardened walkers but who occasionally walk a range of routes in a variety of settings ranging from woodlands and forest to coastal areas, mountains and moorlands.

- Some, but generally low levels of navigational skill
- Some, but limited confidence levels in relation to the outdoors
- A very wide range of fitness levels, but generally quite low
- Will use both prescribed routes and social trail networks

Not committed or regular walkers, but do occasionally walk on routes that are quite challenging such as key or iconic mountain walks, but for the most part they walk at low levels for between 1 and 4 hours.

They will make special journeys to go and walk certain routes or trails and are likely to use some social trail networks as well as prescribed routes. This group will make use of guidebooks and other material to plan routes on social trail networks and often in groups. This group will use trails of between Category 1 and 4 including forest tracks and roads, farm tracks, desire lines and informal paths and routes which may involve significant elevation change. However, this cohort requires trails that are clear on the ground and easy to follow, but this does not necessarily mean that they have any formal built structure.

In addition, this cohort are very likely to use prescribed routes of the appropriate length and nature and may very occasionally undertake day long walks on iconic routes or trails, for instance to the summit of a particular mountain .

Ramblers

This is a moderately large, but very significant cohort who use trails in a very wide variety of ways. They are significant in that they are often members of walking or rambling clubs who are also involved in access advocacy and in organizing walking events.

- Good levels of map reading and navigational skills
- Good levels of outdoor skills and competence
- Good levels of fitness
- Will walk virtually any route or trail in a wide range of settings
- They are very regular walkers, who use trails at least once a week

Whilst this group are hardened walkers with high skill and confidence levels, they are most likely to use lower level routes in forests, coastal or lowland settings of between 2 and 6 hours duration. Whilst this cohort will use prescribed routes, they are much more likely to use social trail networks and trails of between Category 1 and 5 including public rights of way forest roads and tracks, farm tracks, purpose built trails, desire lines and traditional access routes. Crucially, this cohort does not necessarily require trails that are clearly visible or obvious on the ground or trails that have a formal built structure. In addition, routes used by this cohort are very likely to include very significant elevation changes. This cohort are very likely to make special journeys to access particular trails such as routes to particular mountain summits etc. and are also very likely to walk in groups. In addition, this cohort may occasionally do multi day walks, particularly iconic trails.

Trail Runners

A small but fast growing cohort of trail users that is centered on those who run on relatively low level trails in a variety of settings, including forest roads and tracks, urban parks and country parks and on rights of way. They mostly use well made trails, often on a very regular basis several times a week.

- Relatively high levels of fitness
- Limited outdoor skills
- Limited navigation skills
- Most likely to use trails close to home

This cohort will use social trail networks close to home but are more likely to use prescribed routes. The routes tend to take between 30 minutes and 1 hour to complete and typically the trails used by this cohort range from Category 1 to Category 4. However, they are more likely to use trails of between Category 2 and 4 which have obvious lines on the ground and some kind of formal built structure. Routes used by the cohort will generally not include significant elevation change.



Hill Walkers and Fell Runners

This is the 'hard core' cohort of this user group and consists of hardened walkers and runners who primarily walk in mountain or moorland settings on challenging routes with difficult trails and considerable elevation change. In relative terms it is a very small cohort but it is very significant in that they are accessing some of the most sensitive and fragile landscapes and habitats and this group's impact can therefore be quite significant relative to its size.

- High levels of outdoor skill and expertise
- High levels of map reading and navigation skill
- Want challenging routes in remote and wild settings
- Walk or run and least once a week
- Will make special journeys to access particular routes or trails
- Specifically want to access high ground

This group are primarily looking for a 'wilderness' or 'adventure' experience in a wild upland setting and are looking for routes that access high ground and specifically summits, high ridges and cols and do not necessarily need trails with any obvious line on the ground or formal structure, indeed many hill walkers and fell runners are able to move around wild places without using any trail at all. However, the reality is that the majority of this group do use a variety of trails such as forest roads, farm track and quarry tracks to access high ground and then mostly follow well established informal paths and desire lines to access key control points.

This group therefore use trails ranging from Category 1 to Category 6 but with an emphasis on trails of Category 4 and above. Routes can be anything from 2 to 10 hour duration, with very considerable elevation changes. In addition, this group will occasionally do multi day routes and will also compete in competitive events of between 30 minutes and 2 days duration.

Whilst this group is small in terms of numbers, there is mounting anecdotal evidence that it is growing significantly.



Trail definitions

Trail Width	Width of the part of the trail that is travelled over by trail users. Built structures or not purpose built including compacted earth and gravel, scree, boulders, mud, exposed roots and vegetation/ground cover. Clearance on each side relative to the trail category. Can vary according to trail category. Minimum widths are defined in trail category.
Trail Gradient	Max average gradient /absolute maximum gradient. Average gradient is defined as the mean gradient throughout its length taking into account both maximum and minimum gradients. Absolute maximum refer to the steepest part of the trails and the trail classification and grading system also defines the maximum distance that the absolute trail gradient can be maintained at. Both average and absolute trail gradients must not be exceeded if trails are to meet the required classification and grading criteria.
Trail Surface	The nature of the surface that may be appropriate in relation to each category and the trail surface is defined as that part of the trail which is travelled over by users. The trail classification and grading system defines the minimum standard of surface required in relation to each category and outlines the nature, evenness, variability and stability of surface required and trail surface criteria must be consistently applied across the stated width of any trail relative to its category.
Trail Features	<p>The trail classification and grading system defines the types and dimensions of any features that may be appropriate relative to the trail category. In the case of upland trails, features consist of level changes and steps.</p> <p>Level Changes <i>Changes or shifts to either a higher or lower level. The height and frequency of level changes has a very significant effect on the classification of any trail, i.e. the higher the level changes and the greater the frequency, the higher the classification. Such changes can be caused by features in the trail surface such as gullies, steps, rocks, roots or potholes and must not exceed the dimensions specified in the trail classification and grading system if trails are to meet the required trail category.</i></p> <p>Steps <i>Constructed to gain height on steep ground in formally built trails. They can be built of stone (stone pitching) or from timber with stone fill and they consist of risers and treads. The riser is the front face of the step and the height of these must comply with that which is stated in the trail classification and grading. The height of the riser has a very significant effect on who can and cannot use the trails as does the frequency of the step.</i> <i>The tread is the flat upper part of the step and the width and length of this must comply with the dimensions that are stated in the trail classification and grading. In addition the percentage of steps to be found in any trail has a significant effect on its overall classification and grading i.e. the higher the percentage of steps the higher the classification</i></p>

Categories of trails.

- | | |
|------------|---|
| Category 1 | Occasional walkers or even leisure walkers.
Low trail gradients should allow access for a range of physical abilities, but they are not accessible to 'All Abilities'. |
| Category 2 | Range of users including leisure walkers and occasional walkers and should have clearly defined lines that are easy to follow throughout. |
| Category 3 | Leisure walkers and occasional walkers and should have clearly defined lines that are easy to follow throughout. |
| Category 4 | Occasional walkers and hill walkers/fell runners
Average trail gradients 15% |
| Category 5 | Occasional walkers and hill walkers/fell runners
Average trail gradients 25% |
| Category 6 | Hill walkers and fell runners. Difficult and challenging trails in remote settings. |





A formally built Category 4 upland trail with numerous level changes of up to 400mm high



Stone steps on a Category 6 trail, Note the steep gradient, high frequency of the steps and the short length of the treads also note the unprotected edge or drop of more than 2.5m



Category 1

Most easily accessible type (in upland settings)
Not accessible to all users (because of their upland settings)

Most likely to be formally built tracks, such as vehicle access routes or informal routes across easy low angled terrain.

Widths	Minimum 2m
Surfaces	Even surfaces/compacted gravel and stones (on formally built trails), compacted earth and soil and short ground cover vegetation.
Trail Gradients	Average trail gradients $\leq 5\%$, max gradients $\leq 8\%$ ($>30\text{m}$ in length).
Trail Features	Small level changes of not more than 100mm high at intervals of not less than 10m. Should not include steps. No unprotected, exposed edges or drops $\geq 1.5\text{m}$ high.

Accessible to occasional walkers or even leisure walkers.
Low trail gradients should allow access for a range of physical abilities, but they are not accessible to 'All Abilities'.
Clearly defined and obvious trail line, easy to follow.





*Category 1 trail with a surface of short ground cover vegetation
– note the low gradient and 2m width*



Category 1 trail which is also a hardened and compacted vehicle track – note the width, small level changes and low gradient



*Category 1 trail which is also a vehicle access track
– note the largely compacted and even surface, width (2.5m) and low gradient (around 6%)*



Category 1 trail with no formal built structure.



Category 2 Trails

Easy access trails / usually formally built structures than informal routes.

Can be vehicle access tracks or easily accessible desire lines across easy open terrain.

Widths	Minimum width 1.5m
Surfaces	Even surfaces such as compacted gravel and stones (on formally built trails), compacted earth and soil and short ground cover vegetation, can include some loose material up to 100mm deep and loose stones up to 100mm diameter. Surfaces may also include areas of standing water, not more than 80mm deep and mud/peat not more than 80mm deep.
Trail Gradients	Average gradients should not exceed 8% whilst maximum gradients should not exceed 12% for more than 50m
Trail Features	Steps – risers not more than 150mm high, treads not less than 500mm long, level changes up to 150mm at intervals of not less than 2m. Should not include unprotected, exposed edges or ≥ 1.5 m high.

Category 2 trails should be accessible to a range of users including leisure walkers and occasional walkers and should have clearly defined lines that are easy to follow throughout.





Category 2 upland trail which has no formal built structure, but has become established over time – note the 2m width, loose surface and small level changes



Category 2 trail with only a partly constructed underlying structure – note the variable surface which includes some loose material, mud and vegetation.

Category 3 Trails

Formally built tracks/trails or informal desire lines with no built structures. In the case of formally built tracks and trails Category 3 trails have more variable surfaces and widths than Category 1 and 2 trails, larger and more frequent trail features and are less accessible to a range of users. In case of informal trails with no built structure, Category 3 trails will have a well defined line through variable but generally open terrain.

Width	Minimum width 1m
Surface	Variable surfaces: gravel and stones, compacted earth/ soil, short ground cover vegetation. Exposed bedrock, stone paving and stone pitching, loose material max 150mm deep, loose stones max 150mm diameter. Standing water, max 100mm deep. Mud/peat max 100mm deep.
Trail Gradients	Average trail gradients 10%, max gradients $\leq 15\%$ for not more than 100m
Trail Features	Steps – risers max 300mm high, treads min 500mm long, level changes up to 300mm at intervals of not less than 2m. Stream crossings max 2m wide - stepping stones up to 300mm high x 400mm wide at intervals max 150mm. Encroaching vegetation such as bracken, heather and tussock grass. Unprotected, exposed edges or drops of max 2m high.

Category 3 trails should be accessible to leisure walkers and occasional walkers and should have clearly defined lines that are easy to follow throughout.





Purpose built Category 3 trail – note the width (1.5m) and the uneven surface



a Category 3 vehicle track – note the width (2m), gradient (6%) and variable surface.



Category 3 trail with little or no underlying structure – note the width, slightly uneven and variable surface which includes stones, soil, mud and grass.

Also note the low gradient which qualifies this trail as Category 3 even when taking into account the nature of the surface.



Category 4 Trails

Formally built / informal desire lines. Steep tracks with variable and inconsistent surfaces and larger and more frequent features than Category 3 trails. Formally built with narrow trail widths, frequent features and structures including stone pitching and paving.

Desire lines, livestock and animal trails through varied difficult and rugged terrain including areas of scree, boulders, bog and rank vegetation such as heather and bracken.

Width	Minimum width 600mm
Surface	Variable surfaces incl. gravel and stone, earth and soil and short ground cover vegetation. Exposed bedrock, stone paving and stone pitching, loose material max 200mm deep, loose stones max 300mm diameter. Areas of standing water, max 100mm deep. Mud/peat max 100mm deep.
Trail Gradients	Av. trail grad. 15%, max gradients should not exceed 20% for more than 200m
Trail Features	Steps – risers max 500mm high, treads min 400mm long, level changes max 500mm at intervals min 2m. Stream crossings max 3m wide - stepping stones max 300mm high x 400mm wide at intervals of max 150mm. Encroaching vegetation such as bracken, heather and tussock grass. Unprotected, exposed edges max 3m high.

Occasional walkers and hill walkers/fell runners. Formally built Category 4 upland trails should have clearly defined lines on the ground. Informal Category 4 upland trails with no built structure may have ill defined and discontinuous lines on the ground, and may also feature trail braiding and a choice of lines.





Category 4 trail – note the uneven surface, level changes but low gradient. Whilst the gradient is low (5%) the uneven surface and size of the level changes qualifies this trail as Category 4.



Category 4 trail with no formal built structure – note the very narrow tread (600mm) and level change (200mm)



Category 4 trail that is also a vehicle track – note the unstable surface made up of large loose material and steep gradient (18%)



A purpose built Category 4 trail featuring extensive stone pitching – note the width (1.2m maximum), uneven surface with small level changes. Also note the average gradient (around 15%)

Category 5 Trails

Formally built structures/informal desire lines.

Steep stone pitched or paved trails / livestock and animal paths, desire lines through difficult, rocky and rugged terrain.

Width	Minimum width 500mm
Surface	Variable loose and unstable surfaces including gravel and stone, scree, boulders, earth and soil and ground cover vegetation. Exposed bedrock, stone paving and stone pitching, loose material max 200mm deep, loose stones max 300mm diameter. Max 300mm deep areas of standing water, mud/peat max 300mm deep.
Trail Gradients	Average trail gradients 25%, whilst maximum gradients should not exceed 40% for not more than 200m
Trail Features	Steps – risers max 600mm high, treads min 400mm long, level changes max 600mm at intervals of min 2m. Stream crossings max 3m wide - stepping stones max 300mm high x 400mm wide at intervals of max 150mm. Encroaching vegetation such as bracken, heather and tussock grass. Exposed edges and drops max 3m high.

Occasional walkers and hill walkers/fell runners. Formally built Category 5 upland trails should have clearly defined lines on the ground. Informal Category 5 upland trails with no built structure may have ill defined and discontinuous lines on the ground, and may also feature trail braiding and a choice of lines.





Category 5 trail – note the steep gradient, very uneven surface, numerous level changes and narrow width



Category 5 trail – note very uneven surface, numerous and very frequent levels changes

Category 6 Trails

More likely to be desire lines with no formal built structure.

Formally built trails are likely to be steep stone pitched or paved trails whilst informal trails may include livestock and animal paths and desire lines through steep, difficult, rocky and rugged terrain including scree, boulders, rock outcrops, bog and rank vegetation such as bracken and heather.

Width	Minimum width 300mm
Surface	Loose and unstable surfaces, gravel and stone, scree, boulders, earth and soil and ground cover vegetation. Large areas of exposed bedrock, stone paving and stone pitching, loose material up to 200mm deep and loose stones max 300mm diameter. Areas of standing water > 300mm deep and mud/peat > 300mm deep.
Trail Gradients	Average trail gradients 30%, whilst maximum gradients should not exceed 100% for not more than 50m
Trail Features	Steps – risers > 600mm high, treads < 400mm long, level changes < 1m at intervals of < 2m. Gullies =< 1.5m deep x 3m wide and stream crossings of any width. Encroaching vegetation such as bracken, heather and tussock grass. Unprotected exposed edges and drops of > 9m.

Only accessible to hill walkers and fell runners and are difficult and challenging trails in remote settings. These trails may also feature numerous lines on the ground which are not obvious and may be difficult to follow.





A formally built Category 6 trail – note the steep trail gradient (35%) and large level changes (up to 800mm)



Category 6 trail with no underlying formal structure, essentially a desire line – note the steep gradient (35%), very uneven loose and slippery surfaces, including boulders and mud and the numerous lines on the ground.



Category 6 trail with no formal underlying built structure. Essentially a desire line through scree and the surface of the trail is unstable, uneven and loose. The line of the trail is not immediately apparent.