

KONG MINI MOUNTAIN MARATHON SERIES
2020 CARNEDDAU EVENT – ECOLOGICAL BRIEFING NOTE

Kong Mini Mountain Marathon races are located in Britain's greatest upland areas that often contain features of outstanding biodiversity value and importance. Occasionally, the features that provide this interest can be vulnerable to the wear and tear that may result from the passage of event competitors. The risk of ecological damage is carefully assessed during early stages in the planning process for each event, when every effort is made to avoid sensitive ecological interest areas that could be disturbed by the event.

We are keen to encourage personal route selection choices by competitors on our events to further avoid the risk of local ecological disturbance. This Ecological Briefing Note has been prepared for the 2020 Carneddau event to identify key ecological interest features that contribute to the special character of the event area, with route selection comments to help minimise the risk of localised ecological disturbance.

The 2020 Carneddau event area extends into one of the core areas of mountain landscape within northern Snowdonia, comprising one of the most distinctive and ecologically valuable areas of upland landscape in Britain. This includes the high ridges of the Carneddau with their ice-shattered boulder fields creating Wales' arctic landscape.

The high altitude of the event area landscape is reflected in extensive areas of montane and fell-field vegetation comprising highly specialised arctic alpine plant species. This is a post-glacial relict flora of international importance that is very slow-growing and vulnerable to damage by the disturbance effects of trampling. However, race controls have been located within this area to encourage race competitors to follow existing paths, helping to minimise the need to cross pristine montane vegetation and habitat.

In addition to tracts of high value upland vegetation and wildlife habitat, extensive parts of the event area comprise upland grassland and dry heath that are relatively robust in terms of resisting potential disturbance from trampling effects. Localised ecological interest features are present within these areas that include patches of upland woodland, blanket peat, wet heath, upland lake margins, rock outcrop ledges, boulder field and scree habitats.

A variety of distinctive upland wildlife habitats and vegetation types are present within the event area. These include * areas of International nature conservation importance, and * areas of National nature conservation importance. Existing hill paths are available for passing through parts of the event area, helping to avoid the risk of disturbance to sites and features of special nature conservation interest. For situations where event competitors might be required to pass through areas of land not crossed by hill paths this ecological briefing note should support personal route choices that will avoid the risk of significant ecological disturbance. This ecological briefing note has also been produced to communicate the special upland environmental interest of the event area to enrich the experience of participating in the Carneddau event.

- **Dry acid grassland** is a widespread vegetation type within the event area, where centuries of livestock grazing has converted heather moorland to open grassland. These areas provide a relatively robust vegetation type that can generally withstand the trampling effects of hill running.
- Extensive areas of dry acid grassland can include **mosaics of other upland vegetation** types such as blanket bog, heather-dominated heath vegetation and wet acid grassland creating areas of local vulnerability to a concentration of trampling by Carneddau competitors.
- Sub-montane vegetation within the event area includes tracts of **dry and wet heath**. Areas of dry heath are relatively robust in terms of resistance to disturbance effects of trampling, but wet heath areas can be more vulnerable. These often grade into bog vegetation on deeper peat that combine to create areas of particular upland ecological interest. Wherever possible competitors should avoid crossing wet heath vegetation when choosing running routes. If crossing these areas cannot be avoided then running lines should try to link patches of drier vegetation that will be less vulnerable to disturbance effects of trampling.
- **Blanket bog** is an important feature at several locations within the event area. Some of these areas comprise degraded blanket bog where bog vegetation has been lost and peat erosion gulleys (peat hags) have formed where and the underlying peat is being eroded.
- Disturbance of **blanket bog** by runners churning through peat hags has the potential to trigger further peat erosion by destabilising the peat surface. Wherever possible, route choices in these areas should try to link strips and patches of surviving moorland vegetation between the peat hags. These are often quite well-drained, providing areas of relatively robust vegetation and resistant to the trampling effects of running.

- In contrast to areas of degraded **blanket bog**, some locations on plateau landforms within the event area contain patches of high quality blanket bog with an intact vegetation surface that lack eroding peat hags. These are typified by areas of wet heath vegetation interspersed with shallow pools, often associated with *Sphagnum* mosses. These areas often comprise a mosaic of vegetation types that will include slightly **raised areas of better drained peat with drier heather moorland and acid grassland vegetation**. These will be far less vulnerable to disturbance through vegetation damage by trampling and should ideally be selected when making route choices for running through these intact blanket bog areas.
- Areas of **wet acid grassland** will be encountered where impeded drainage occurs within relatively level hill grassland areas or where groundwater emerges at the surface as seepages across more steeply sloping ground. Wet acid grassland can be of special nature conservation interest, in particular where groundwater seepages provide conditions for communities of specialised mosses, liverworts and other specialised plants. These vegetation types can be vulnerable to persistent disturbance effects of trampling and should ideally be avoided wherever possible by selecting routes that keep to dry acid grassland to by-pass wet grassland patches.
- **Wet acid grassland** at groundwater seepages on steep ground can be difficult to avoid where they cross valuable contouring lines. Avoidance of these areas could involve a significant route change and deviation from the desired contour level. Despite this, it would be ideal if damage to seepage zone vegetation could be minimised, often located within shallow gulleys, re-entrant features or associated with ground level rock outcrops that cross steep slopes.
- On hillsides, soil movements within **dry and wet acid grassland** areas can develop well-defined micro-terrace systems, often referred to as sheep walks or trods. These typically follow contours and can provide extremely useful running lines. Grassland vegetation at the edge of these micro-terraces is often friable and easily broken off. Care should be taken when using these features for contouring to avoid running on the edge of these terraces to minimise grassland damage.
- Distinctive **semi-natural woodland** of very high conservation interest is present within the event area. Many of the broadleaved woodlands are of great importance for the mosses and liverworts that grow on tree trunks and boulders on the woodland floor. The damp microclimate of these woodland habitats often maintains vegetation comprising highly specialised mosses, liverworts and other plants.
- The event generally avoids the need to pass through or in close proximity to key areas of semi-natural woodland interest. Where competitors need to cross woodland areas, it is important that existing paths are used.
- The summits and ridges of the event area have significant tracts of **montane grassland and heath** vegetation within areas of important high-level **ice-shattered boulderfield**. These comprise relict post-glacial vegetation that are of very high ecological interest and consist of very slow-growing grass, sedge, rush and lichen species. Disturbance of these areas by trampling typically has long-lasting impacts and can trigger erosion of adjacent vegetation areas in the harsh climate of summits and high ridges where this vegetation is found. The vegetation of these areas has often developed within periglacial patterned ground features such as stone polygons and stone stripes that are important upland geomorphological features that are vulnerable to trampling disturbance. Wherever possible competitors should follow existing paths through these areas to avoid trampling damage to pristine montane vegetation and should always minimise disturbance of scree blocks.
- The special upland ecological interest of the event area includes vegetation of **rock outcrop ledges and seepage zones**. Many of these locations are known to be important for the relict post-glacial flora that they contain, protected from significant grazing by their inaccessibility. While most of the taller outcrops will not be accessed by competitors, route selection might include crossing areas of low rock outcrop that are still of value for these uncommon upland plant communities. Where this terrain is crossed great care should be taken to minimize disturbance to fragile ledge vegetation.
- The event area has a number of **hill lakes** that are generally of considerable nature conservation interest. This is usually associated with well-developed lake margin vegetation that often includes valuable peatland and mire vegetation. Under no circumstances should any upland lake be entered by any competitors, and route choices should avoid running near lake margin vegetation areas.
- The event area contains a complex network of **streams and rivers**, some of which are potentially vulnerable to ecological disturbance from repeated crossing by runners. Some of the rivers within and surrounding the event area are covered by very high-level nature conservation designations, including watercourses that could support internationally and nationally threatened animal species such as **otter** and **water vole**. In many cases, the nature conservation interest of these rivers and streams concerns use of the banksides by these animals. As a consequence, great care should be taken by competitors at stream crossings, preferring the use of bridges and stepping stones to minimise bank disturbance when entering and climbing out of stream channels.