Employers Requirements

* LDNPA Design Principles and Concepts
* LDNPA Standards and materials
* LDNPA Style Guide
  + Trail Surfacing
  + Bollards and Signage
  + Gates and Fences
  + Drainage
* Contractors Design – Bespoke elements
* Health and Safety

LDNPA Design Principles and concepts

Route will be designed as predominately hard surfaced, accessible path. Design considerations are:

* Safety – access / egress points to and from highway
* Alignment – follow the landscape and use natural lines to blend in
* Structures – bridges / ramps, fit with surroundings
* Surfacing – suitable for horses, cycles, push chairs and mobility scooters
* Drainage – surface water - as appropriate for ground conditions
* Access furniture, gates – ease of use, bridleway width
* Way marking and signage – easy to follow, appropriate warning signage
* Materials – local province for stone
* Disturbance – Minimise and mitigate by:
  + Restoration and rebuilding the route on existing infrastructure
  + Creating new build sections through areas of lowest ecological value
  + Retain historic features

Standards and materials

Construction standards and materials will conform to the relevant British Standard or Eurocode.

Stone is to be non-calcareous and of a local geological provenance for the area. Stone must come from quarries with appropriate planning permissions.

Timber is to be sustainably sourced, hard or softwood as appropriate and treated. Graded as appropriate for end use.

Steels and fabrication to be supplied and undertaken by appropriately certified companies

Recycled materials:

* Road plainings, scalping and other recycled stone products are not considered appropriate.
* Recycled rubber surfacing may be appropriate for small sections of path in high wear areas – where used this will be an appropriate and approved proprietary product.
* Recycled plastic products may be used in geogrid and for bridge decking

Style Guide -

1. Trail surfacing

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| **Aggregate Path** | |
|  | **\\ldnpa\authority\Projects\PMF Projects\PR0038 - Southern Node MUT\5. Design\3. Product\3.3 Style and design\12341.jpg** |
| \\HAYCOCK\Authority\Projects\PMF Projects\PR0038 - Southern Windermere Trails\5. Design\10. Images - before\S6G YMCA Imgs\S6F 200220 001.jpg |
| Open country – fields / lanes, new build and restoration | Examples – Cycleway / Bridleway (fencing type indicative only - specified seperately) |

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| --- | --- |
| **Root Protection Path** | |
|  | C:\Users\BWI\AppData\Local\Microsoft\Windows\Temporary Internet Files\Content.Word\P1011837 - Copy.jpg |
| C:\Users\BWI\AppData\Local\Microsoft\Windows\Temporary Internet Files\Content.Word\P1011854 - Copy.jpg |
| Woodland areas | Root protection path – under construction (top) and finished (bottom) |

1. Bollards and Signage

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| **Timber Bollard / Warning Sign** | | |
| Warning signs  1400mm  Steel sleeve  Routed Lettering  1400mm  600mm  150mm  1500mm  1500mm  Bollard from roadside access to prevent vehichle access. If bollard is to be removable then a steel sheeve will be added below ground level and a lock / bolt mechanism on the bollard. Gap between bollards and wall / fence = 1500mm.  Timber will be sustainably sourced hardwood / softwood as appropriate. 150x150mm weather topped. | \\ldnpa\authority\Projects\PMF Projects\PR0038 - Southern Node MUT\5. Design\3. Product\3.3 Style and design\12351.JPG | |
| Warning Sign | |
| **\\ldnpa\authority\Projects\PMF Projects\PR0038 - Southern Node MUT\5. Design\3. Product\3.3 Style and design\12343.jpg** | |
| Bollard at end of section / Road junction (gaps 1500mm) | |
| **Directional Sign / Waymarking** | | |
| Finger Post  Height as appropriate for location – use LDNPA guidance.  Site and height to reduce risk to trail use  Post 100mm x 100mm – weather topped  Fingers routed  Fixed by mortice and dowel  750-900mm depending on ground conditions  Packed / back fill  Waymark Post  Waymark Disc  1000mm  500mm  Packed / back fill | \\ldnpa\authority\Projects\PMF Projects\PR0038 - Southern Node MUT\5. Design\3. Product\3.3 Style and design\12352.JPG |  |
|  |
| Directional sign – lower height as set back against wall. | Way marking – Named Trail Roundal (top) bridleway destination & distance (bottom) |
|  | |
| Directional sign at junction – showing fingers attached on adjoining faces of post. Set above head height as sticks out into trail. | |
| Interpretation Panels | | |
| Examples of Interpretation Panels used on K2T  Interpretation: Specific to particular visitor destinations, route maps, historical features such as the L & HR railway, or natural features such as areas of semi-ancient natural woodland. Information to explain how this trail will help support the sustainable travel agenda. |  | |
|  |  | |

1. **Gates and fences**

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| **Two way bridle gate** | **One way bridle gate** | **Field gate** |
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| Post and wire fence (plain) | Stock Netting – Single top wire (plain) |
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| Fences to be strained seperately from gates and stiles. | Variations:   * Double top wire and single running wire at ground level * Barbed top wire |
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1. Culverts / low and overland flow

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| Culverts – twin wall plastic pipe with headwalls | Culvert with headwalls in turf lined ditch |
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| © SNH Upland Paths Handbook | Culverts will be single pipe only. |
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1. Bridges – Timber / Timber with steel main beams (Standard Design <9m)

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| Timber Bridge | Bridge and Ford on Cycle Trail / Bridleway |
| Main beams will be steel | **\\ldnpa\authority\Projects\PMF Projects\PR0038 - Southern Node MUT\5. Design\3. Product\3.3 Style and design\12345.jpg**  Timber Bridge with ford to downstream side |
| https://pbs.twimg.com/media/ENyI7yvXYAA2EM1.jpg  Steel beam / timber deck bridge with ford |
| 1. Bespoke Bridges/Boardwalks   Drawings contained within this application  HT1195.1.101 HT Path Area 5 REV A High Stott ParkBlack Hole Wood Ramp EXTG Alternative  HT1195.1.101 Path Area 5 REV A High Stott ParkBlack Hole Wood Ramp PROP Alternative  HT1397.1.101 Ramps Crossing YMCA Car Park |  |

**Contractors Design – Bespoke elements**

HT1195.1.101 HT Path Area 5 REV A High Stott ParkBlack Hole Wood Ramp EXTG Alternative

HT1195.1.101 Path Area 5 REV A High Stott ParkBlack Hole Wood Ramp PROP Alternative

HT1397.1.101 Ramps Crossing YMCA Car Park

**Health and Safety Requirments**

The contractor will be required to comply with the following Health and Safety standards:

LDNPA Contractor Health and Safety Code of Practice V1 (Annex 10)

Compliance with CDM Regulation 2015

The contractor will be expected to produce the following Health and Safety documentation:

Pre-Construction Information

Construction Phase Health and safety Plan

Risk Assessments and Method Statements

Health and Safety File