Manmade MTB Trails

- The Need
- The type
- Funding
- Planning requirements
- Insurance
- Maintenance
- Long term planning

Types of trail

CAD DRAWINGS

ARTIST IMPRESSION

<table>
<thead>
<tr>
<th>Section 3-3 Carn Dailm</th>
<th>Length</th>
<th>Strategic Value</th>
<th>Slope Details</th>
<th>Curve Points</th>
<th>Ground Conditions</th>
<th>Topography</th>
<th>Constraints</th>
<th>Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1085m climbing</td>
<td>High, reduces conflict issues with riders descending fast through deep daylight drop zones and increases value of trail</td>
<td>Undulated, windbreak/Large Route</td>
<td>Leave from existing turning point at end of forestry road, follows old extraction road track, exits just uphill from high point on top road</td>
<td>Badly drained with 100-200mm of water standing on top; hard</td>
<td>up to 25% gradients</td>
<td>Wet areas to consider</td>
<td>Locally won ASR will be used to overlay a 400mm-500mm base on the centre line of the soil track, overlaid with a 200mm top dressing. Top edge tarmacked back to give narrow top edge. Top dressing to be 100mm of high quality new polyethylene pipes as required</td>
</tr>
</tbody>
</table>

- Maintenance
- Long term planning

Section 3-3 Carn Dailm

- Length
- Strategic Value
- Slope Details
- Curve Points
- Ground Conditions
- Topography
- Constraints
- Construction

- Manmade Type
- Clearing
- Bench Cut
- Surfacing
- Stone pitching
- Gravel
- Road surface
- Interpretation

- 34.7 ha of land
- 34.7 ha of land
- 1.6m, moderated with locally pitch to give slight drainage
- Locally won, minimum 50mm on curved profile and compacted to 50mm
- 900mm as required
- 1.6m
- Waymakers at start and finish plus various warning signs at road.
Maintenance

Building Trails

- Layout
- Guidelines
- Construction
  - Costs
  - ASDUG v Surfaced
  - F.B.C. v Ditched
  - Machine v Hand dug
- Stages of Build
- Signing-off

Trail Layout.

Sustainable Trails

- IMBA guidelines

Trail Cross Section

50% Rule

- Fall line = 40% grade
- Fall line = 20% grade
- Fall line = 10% grade

This trail is properly designed to be well below 50 percent of skidline. Water coming down the hillside will cross the trail and flow off of it, minimizing erosion.

This trail is poorly designed because its grade exceeds 50 percent of skidline. Water will run down the trail, building volume and velocity and carry away tread material loosened by users. This trail should have been designed with a maximum grade of 10 percent.
### Trail Costs

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>QUANTITY</th>
<th>Unit</th>
<th>RATE</th>
<th>AMOUNT</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Excavate F.B.C. to mineral base, width 1.2m</td>
<td>230</td>
<td>m3</td>
<td>5.00</td>
<td>1150.00</td>
</tr>
<tr>
<td>2</td>
<td>On F.B.C. construct formation 0.9m wide with accreting mineral base material to a depth of no less than 150mm compacted</td>
<td>230</td>
<td>m3</td>
<td>5.00</td>
<td>1150.00</td>
</tr>
<tr>
<td>3</td>
<td>Construct trail 0.75m wide on FBC using Type 1, compact to refusal</td>
<td>40</td>
<td>m3</td>
<td>50.00</td>
<td>2000.00</td>
</tr>
<tr>
<td>4</td>
<td>Re-instate trail margins</td>
<td>230</td>
<td>m3</td>
<td>1.50</td>
<td>345.00</td>
</tr>
</tbody>
</table>

**TOTAL THIS SECTION** £5250.00 £22.82/m

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<tbody>
<tr>
<td>5</td>
<td>25 tons Type 1</td>
<td>25</td>
<td>m3</td>
<td>50.00</td>
<td>1250.00</td>
</tr>
<tr>
<td>6</td>
<td>30 tons rock</td>
<td>30</td>
<td>m3</td>
<td>50.00</td>
<td>1500.00</td>
</tr>
</tbody>
</table>

* ASDUG or Surfaced
* Full Bench or Ditched?

### Full Bench or Ditched?

- Full Bench
- Ditched

### Unsuccessful Full Bench Cut
25/04/2014

Machine or Hand

Happy, smiley volunteers – Nightmare!

Flagging the route

Felling the Corridor

Roughing out Trail
Bringing in Materials

Dumper to Powerbarrow

Avoid This!

Shape up and compact

Compact – heavier the better.
Finished Trail, singletrack – Rock Armoured

Contour Trail With Grade Reversals

Raised Bench

Sustainable Trails

Don't Build in the WINTER!