



Basic Path Building TPG GN2.0

Introduction

1. This guide provides an overview of path construction techniques generally applied by TPG, The approach details the minimum requirements to be understood and applied on TPG volunteer projects. Certain circumstances may require more complex solutions. Extensive in depth guidance and explanations are available in the Paths for All Lowland Path Construction Guide (Copyright Paths for All and Scottish Natural Heritage 2019).
2. Volunteer path development has been focused on the village area, with contractor led projects likely on larger developments connecting communities.
3. The Project Manager will be responsible to outline the development projects to volunteer teams and direct project operations, with all volunteers responsible to implement the construction according to the standard determined for the project.
4. The Work Party Leader will supervise on site operations.

Project Manager

1. The Project Manager will implement the development project agreed by TPG Board, overseeing operations to ensure all construction and health and safety requirements are met.
2. Implementation of the design may meet practical issues during construction. Resolution of major issues will be directed and agreed by the Project Manager on site, engaging with the wider team as necessary.

Work Party Leader

1. The Work Party Leader will brief the on site work party on the planned work ahead to meet the design and any special safety requirements.
2. Minor on site construction issues are to be addressed by the Work Party Leader, with major matters referred up to the Project Manager.

Volunteers

1. Volunteer workers will familiarise themselves with the general plan and follow the guidance of the Work Party Leader in implementing the construction, following health and safety requirements at all times.
2. Practical issues and concerns arising during operations, which cannot be readily solved, should be referred for resolution to the Work Party Leader.

Path Design

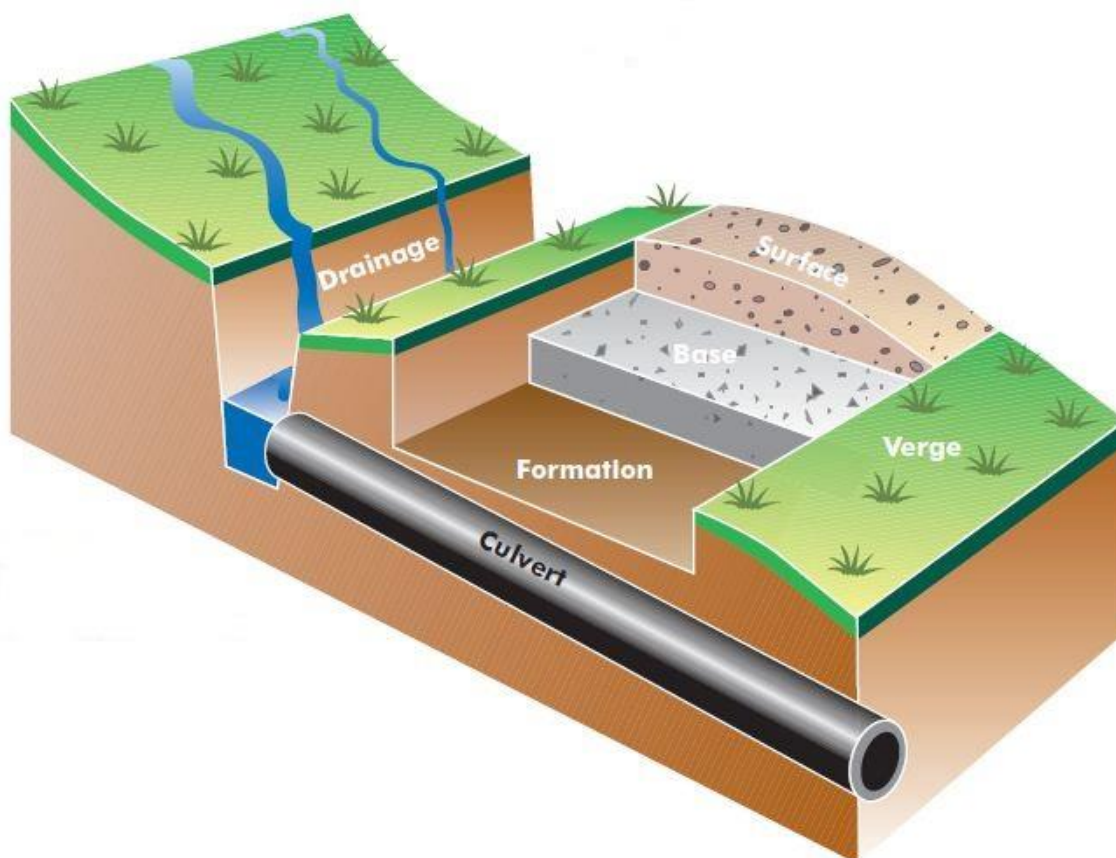
1. Design and development of the path plan includes consideration of location, user needs, surrounding land use, landscape, topography, water features and the path corridor.
2. A site survey is to be conducted by the Project Manager with a small team to assess the environment and to determine the route and path design features.
3. Steep gradients will be minimised and the path width will be determined according to users and conditions. For TPG 1.5m will be standard with usual minimum of 1.2m and maximum of 2.0m.
4. The construction design and materials applied by TPG follow generally accepted path construction techniques, for example as documented by Paths for All.

Path Construction

1. The path structure will consist of several layers as follows:
 - a. Formation – the prepared ground on which the path is constructed, whether just by clearing vegetation or by excavation depending on ground conditions.
 - b. Geotextiles – a man-made synthetic material to separate the base from the formation layer and to reinforce the base layer.
 - c. Base – the main load bearing layer of the path, also referred to as sub-base, which is made up of well-graded granular stone from larger down to fine particles, typically 20mm sub base. The deeper the base layer the stronger it will be. The base layer will regulate any surface imperfections left in the formation layer, a smooth, even and well compacted base layer being essential to a high-quality surface. Usually 100mm to 200mm depth depending on ground conditions and compacted with a compactor or whacker plate.
 - d. Surface – the surface layer is critical to the usability and appearance of the path as it is the layer the user contacts, transferring the user's weight to the base layer below. Surface types used in our rural setting are unbound surfaces and natural surfaces. Our unbound surface is 20mm sub base or granite dust on top of the base layer, although the path's base layer itself can be used when lower graded stones are incorporated in the base layer. Surface is smooth compacted. Natural surfaces could be mown grass, or a muddy area improved by drainage yet left with a natural surface.
 - e. Edges – path edges should be supported to prevent lateral spread of the base layer and to protect the edges of the surface layer, with ideally the base layer wider than the surface layer. For simpler design, or with less space, the undisturbed sides of the formation tray will provide support to the path edge.
2. Drainage is vital to maintaining path integrity:
 - a. The path should be shaped to shed water by using a camber to let water run to either side, or a crossfall to make water run to one side: the topography will determine the better solution according to natural water flow.
 - b. Surface and ground water can be intercepted to keep it off the path by a ditch or open channel, or a French drain, being a channel filled with pipe and stone. Ditches can look more natural and easier to maintain. A French drain is hidden from view but it is easily blocked and the water attracts tree roots. Piped drains should be designed to allow rodding.
 - c. Culverts are placed at intervals beneath the path base as necessary to feed ditch water away from the path area.

- d. Cross drains may be necessary to divert surface water off or across the path depending on the lie of the path, and soakaways can help disperse the water to ensure it does not return to the path. Examples are cut-off drains, water bars, culverts, or cross drains.
3. Maintenance should be considered by good practice techniques in design and build:
- a. Good drainage
 - b. Ensure water can run off path edges
 - c. Avoid timber edging that rots
 - d. Ensure verges are smooth and level to facilitate cutting
 - e. Be generous with base layer
 - f. Ensure surface is robust

Path Structure and Drainage Illustration (Paths for All)



Trainer Name & Sig.		
Trainee Name	Training date	Trainee Signature