A Deep Trench Latrine is a widely-used communal latrine option for emergencies. It can be quickly implemented (within 1–2 days) and consists of several cubicles aligned up above a single trench. A trench lining can prevent the latrine from collapsing and provide support to the superstructure.

As the trench fills, three processes limit the rate of accumulation whilst providing no significant treatment: leaching, degradation and consolidation. The liquid phase (i.e. urine and water) leaches into the soil through the unlined bottom and walls of the pit, while microbial activity degrades part of the organic fraction and stabilises the pit content. As a result, consolidation occurs.

Design Considerations: Trenches should be around 0.8–0.9 m wide with at least the top 0.5 m depth of the pit lined for stability. The depth (usually between 1.5 to 3 m) may vary depending on local soil conditions and required speed of implementation. A maximum trench length of 6 m is recommended, providing for six cubicles. End cubicles can be extended to make them accessible for disabled people or provide washing spaces, for example for women during menstruation. Proper drainage should be provided for around the trench to ensure runoff and prevent flooding. When the trench is complete, slabs are placed over it. Prefabricated self-supporting plastic slabs can increase the speed of construction, if available. Alternatively, wooden planks can be secured across the trench (leaving out every third or fourth plank for defecation) until wooden or concrete slabs can be produced locally. The slabs can be fitted with pedestal toilets where users do not squat. Separate trench latrines for men and women should be considered. The trench lifespan (the time required to fill it to within half a metre of the top) is a function of the trench volume, divided by the number of users and estimated excreta volume generated per person. On average, solids accumulate at a rate of 3–5 L/person/month and