



Dynamic Compaction (DC) is the use of high energy tamping to induce settlement in a wide variety of ground conditions from loose granular materials to mixed made ground, including domestic landfills.

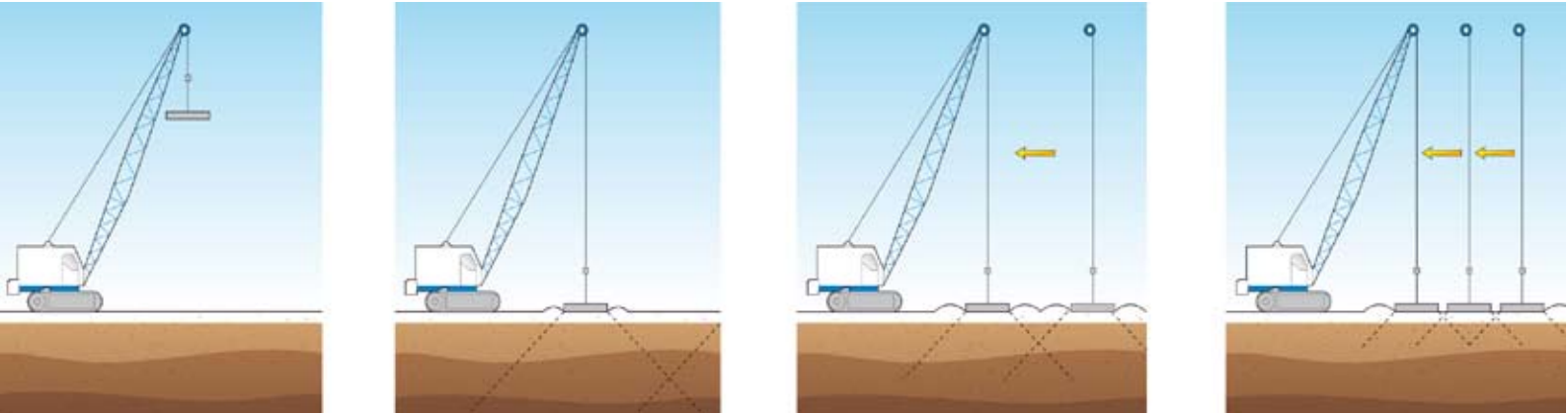
// BASIC TECHNIQUE

The basic system involves dropping a weight ranging between 5 and 20 tonnes, from a controlled height of up to 20m. Compaction to depths of up to 9m can be achieved, depending on soil conditions. The ground is treated by repeatedly dropping the weight onto individual footprints which are arranged on a grid pattern.

Treatment is normally carried out on a number of 'passes' with the weight being dropped a set number of times on a regular grid pattern across the whole treatment area to constitute a 'pass'.

The number of drops, weights used and the height of the drops depend on the required post treatment bearing capacity, settlement performance and soil conditions.

Between two and five passes are generally required, with the first or earlier high energy treatment passes aimed at treating the deeper soil layer. A final low-energy contiguous tamping pass is then usually carried out to compact the shallow near-surface soils disturbed during the earlier higher energy treatment passes.



Dynamic Compaction construction sequence

DC is frequently used to treat backfilled opencast workings or other large, infilled sites such as old quarries or industrial sites. It is also used to treat old domestic landfill sites to help collapse voids within the fill.

DC is commonly used to help support roads, car parks, external hardstandings and yards as well as large floor slabs. Occasionally it can also be used to support foundations.

// STRENGTHS

- DC is a highly sustainable ground improvement technique - typically requiring no excavation. It is suitable for use on contaminated or obstructed sites
- Levels can often be reduced by up to 10% of the depth of fill being treated, thus reducing the amount of spoil requiring disposal
- DC is extremely economical and is ideal for large sites where obstructions preclude vibro techniques



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