with a slope ratio not steeper than 2 horizontal to 1 vertical (see Figure 4.2.5).

(c) Pad footings, strip footings and edge beams not connected to the slab, must be—

(i) founded in natural soil with an allowable bearing pressure of not less than 100 kPa; or

(ii) for Class A and S sites they may be founded on controlled sand fill in accordance with 4.2.4(a).

Figure 4.2.5: Foundations for footings and slabs

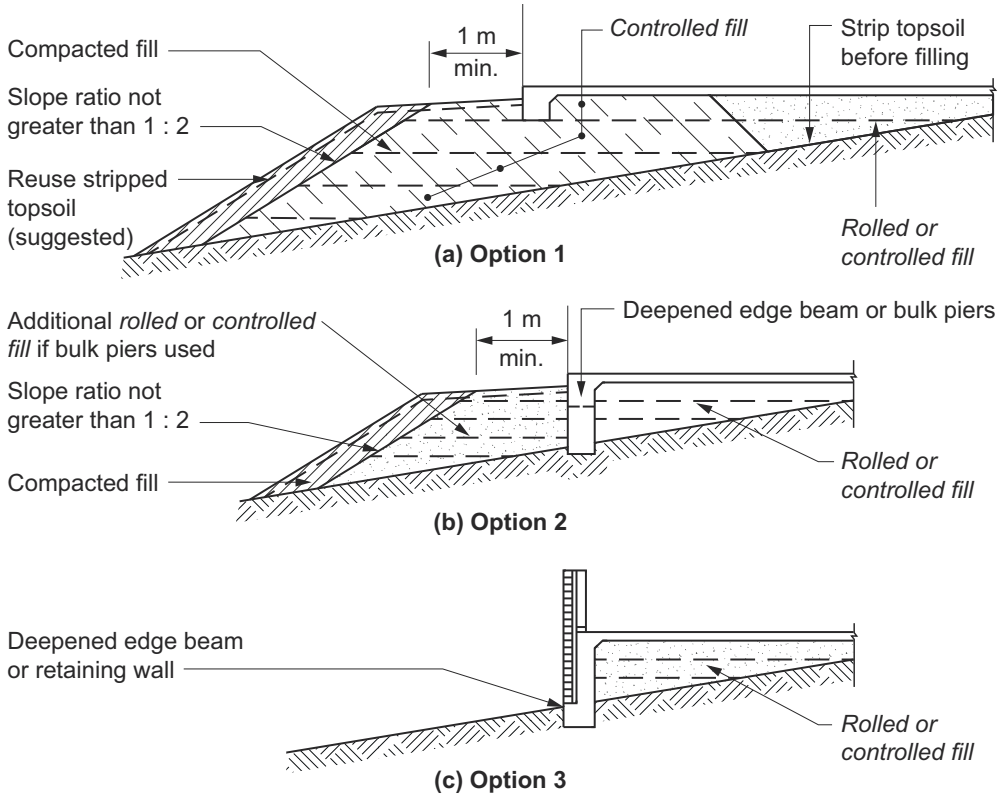

Figure Notes

Compacted fill must be in accordance with 4.2.4.

Explanatory Information

The *foundations* of a building are critical to its successful performance. As such, the soil must have the strength or bearing capacity to carry the building load with minimum movement.

The bearing capacity of a soil varies considerably and needs to be determined on a *site* by *site* basis. For this to occur, the appropriate people need to be consulted. These people may include a qualified engineer or experienced engineering geologist, or it may be determined by a person with appropriate local knowledge. The minimum bearing capacity (soil strength rating) may depend on the *site* conditions. The soil may be naturally undisturbed or be disturbed by building work or the like. Where soil is disturbed by building work and the like, the bearing capacity can be dramatically altered. This is typically the case for sloping *sites* where cut and fill procedures are used. In these situations the soil needs to be consolidated, generally via compaction, to achieve the *required* bearing capacity.

There are a number of alternatives for working on cut and filled *sites*. These are described in Figure 4.2.5.

Option 1 of Figure 4.2.5 refers to the *controlled fill* process which involves the compaction of fill in layers to achieve the bearing capacity described in 4.2.5. The depth of fill for each layer is specified to ensure effective compaction. Fill beyond these depths will need to be installed in accordance with H1D4(1).

Option 2 and 3 of Figure 4.2.5 refer to edge beams that extend through the fill into undisturbed soil which provides the 4.2.5 *required* bearing capacity. In this situation the fill is essentially only taking the internal slab loads.