Fixing Details - Free-Standing Columns

1. The Columns are to stand on properly prepared and designed concrete foundations. The design of the foundation would take into account the size and weigth of the column itself, any anticipated external forces, and the nature of the soil conditions. Typically, a free-standing column foundation would take on porportions of approximately 200mm greater than the size of the precast base, and 200mm deep. Consult an engineer if necessary.
2. Assuming adequate foundations have been prepared, the next step is to drill into the foundation and epoxy in one or more steel rods (diam 10mm). These rods are to be positioned so that they correspond with the hole in the centre of the precast base, and should be as near to the sides of the hole so as not to clash with the reinforcing of the shaft. Alternatively, these rods could be positioned at the time of casting the foundation.
3. The precast base is then placed over these rods and is bedded down using a strong mortar (say 2 parts sand to 1 part cement by volume, plus some bonding liquid). Care is to be taken to ensure that the hole in the precast base is **not** filled.
4. The bases are then left alone, at least until the next day, before positioning column shafts.
5. Immediately prior to placing the shafts, the hole in the precast base is filled with a strong concrete mix (say 2 parts small concrete stone, 1 part sand, 1 part ordinary portland cement). The shaft is then set down on the precast base with the reinforcing bars of the shaft extending into the newly placed concrete. The reinforcing bars of the shaft should be checked for length prior to this, and trimmed if necessary, in order to prevent an annoying delay at a critical time.
   the shaft is to be plumbed and supported using wedges and timber planks. If the column tapers then the shaft is plumbed by measuring a constant space between a spirit level and the top of the shaft on all four sides. Everything should be left alone until the next day.
6. Finally the cap is placed on top of the shaft and the hole in the cap is filled with the same mix as was the base. At this point, whatever may be required for the next stage of construction, should be cast into the cap (eg. bolts, wire ties, brackets, reinforcing rods, hoop irons, etc).
7. All that remains is for the entire column to be finished off, pointing the joint between base/shaft and shaft/cap, and filling the scratches that occur during handling.
8. The strength of the column installation should not be tested until the concrete has had time to gain strength.
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DISCLAIMER

The above information is intended as a guide to the correct installation of precast concrete columns, and Old World Concrets (Pty) Ltd can in no way be held responsible for any installation not actually undertaken by it's official representative.