

CRANBORNE STONE

COLUMN ASSEMBLY DETAIL

Each column is supplied as a non-structural decorative cladding with a hollow central core. For structural use the hollow core can be used to accommodate a reinforced concrete, or structural steel, member. The column is supplied in component form: i.e. capital, shaft, base, plinth and pedestal.

FOUNDATIONS

A column should be erected on a suitable foundation, designed to suit loadings and ground conditions. We strongly recommend that professional advice is taken to ensure that any proposal is designed to be structurally sound.

BEDDING AND JOINTING

All components should be bedded and jointed using 1:1:6 cement/lime/sand mortar (sand to BS882 grade F) or similar. Joints should be approximately 6mm wide to allow for any irregularities in the mating surfaces, and to provide a full bedding and pointing joint. The jointing mortar should be left slightly recessed from the surface of the stonework or subsequently raked out, leaving a rebated joint. Pointing should be carried out using colour-matched dry mix. Alternatively use the bedding mix, colour matched to suit, in which case white cement may be necessary. The joint between the capital stonework and the structure above should be formed using a compressible filler or a weak mortar mix, to form a soft joint and ensure that any loading is carried by the central structural core and not by the reconstructed stonework.

IN-FILLING TECHNIQUES

It is important the hollow core of each column section is lined with polystyrene (or similar) to act as an isolating medium when column cores are in-field with concrete. This will accommodate any possible differential movement between the stonework and the concrete core. The isolating material, when inserted, should make continuous contact with the inner core surface. Care should be taken to ensure sufficient overlap of material at both vertical and horizontal joints. Concrete used to in-fill the cores should ideally have a rounded gravel aggregate of 10mm maximum size. The concrete should be of medium to high workability to assist core filling whilst minimising the effort required during hand compaction. The use of proprietary concrete plasticising admixtures can assist this operation. All columns with shaft drum sections should be concreted one section at a time. Subsequent concrete pours should only take place after the concrete in the preceding section has reached its initial set. If the column is used to sleeve a structural steel member, the resultant void between the stone and steelwork can be left as a void or grouted up. If grouting up is carried out an isolating medium must be incorporated adjacent to the stonework.

Foundations, concrete and steel reinforcements to be designed by others to suite site conditions and loadings.