

SECTION SEVENTEEN

BRICK PAVING FOR FOOTPATHS

17.01 GENERAL

This section covers the requirements for laying of pavers and includes the supply of all labour, materials and equipment necessary to carry out the works.

17.02 STANDARD OF WORKMANSHIP

All work shall be of a very high standard with pavers laid on correct grade and line and shall match existing work where applicable.

17.03 SUB-GRADE

The sub-grade should be prepared to the required profile. It should be sufficiently wide to extend to the rear face of the proposed edge restraint or to the face of existing abutting structures. Any unsuitable material should be removed from the sub-grade and replaced with Class 3 fine crushed rock and compacted in layers not exceeding 100mm.

17.04 SUB-BASE COURSE

The sub-base course will consist of a minimum thickness of 80mm Class 2 fine crushed rock. The surface of the sub-base should be spread and compacted with suitable vibration equipment to achieve optimum compaction. The sub-base shall be approved by the Superintendent prior to the placement of bedding material.

17.05 BEDDING MATERIAL

Sand/cement bedding shall be 6:1 sand/cement mix. Sand shall be white, well graded and washed, passing a 4.75mm sieve and suited to concrete manufacture. Cement shall be first quality Portland cement. The sand and cement shall be thoroughly mixed in a mechanical mixer. Water content shall ensure the bedding is of a stiff uniform consistency. Sand/cement bedding shall be spread loosing in a uniform layer and screeded to the nominated design profile and levels to achieve a uniformly thick layer in the range of 35mm to 40mm. The mix shall only be spread for blocks laid in that day. Under no circumstances shall bedding be left overnight without blocks set on it. Screeded bedding must be protected against accidental pre-compaction and any screeded mix that is affected by rain shall be removed.

17.06 CONTROL STRING LINES

Following the preparation of the bedding course and immediately prior to laying the paving, a grid of string lines should be set up covering the area to be paved. The spacing of grid lines should not exceed 1.5 to achieve suitable control.

17.07 LAYING PAVERS

Lay bricks as designated on the plans. Maximum joint width shall be 2mm. Lines are to be kept parallel with a string line. Cut all splays and mitres with a masonry saw cutter. Care shall be taken that any foot or barrow traffic shall not disturb units prior to mechanical compaction. Protect the paving works by the erection of barricades.

After laying the paving units, they shall be compacted to achieve consolidation of the bedding and brought to design levels by not less than two passes of a suitable plate compactor. The compactor shall have a high frequency, low amplitude mechanical flat plate vibrator having a plate area sufficient to cover a minimum of 12 paving units. Compaction shall proceed as closely as possible following laying, but should not be attempted within one metre of the laying face. Compacting shall continue until lipping has been eliminated between adjoining units.

All work within one metre of the laying face must be left fully compacted at the completion of each day's laying. At the completion, dampen all joints with a fine water spray to achieve mortar set.

All blocks and joints shall be thoroughly moistened. Any units which are structurally damaged during compaction shall be immediately removed and replaced.

17.08 ALIGNMENT AND GRADES

Lay brickwork to alignment and grades shown on the drawings. The deviation from the design profile, measured under a 3.0m straight edge should not exceed 10mm and should not allow ponding of water. The abutting edges of any two adjacent pavers should match, but in no circumstances should they differ by more than 2mm. Where pavers deviate from string line, it will be necessary to remove pavers for several rows and re-lay to the string line.

17.09 JOINT FILLING

After bedding has set, sand for joint filling shall be spread over the paved surface. The sand should pass 1.18mm sieve and have some 10% silty material, but be free of soluble salts or contaminants likely to cause efflorescence or staining.

Broom sand over at least four different directions and remove excess sand.

17.10 EDGE RESTRAINT

The perimeter of all paved areas should be provided with edge restraint to prevent lateral spread of the pavers and consequent loss of interlock. Edge restraints should be formed before compacting adjacent units and the restraints, together with any concrete haunching, should be mature before vibrating of the surface course is undertaken. Haunching to an edge restraint should be continued down to the level of the underside of the bedding course. Where appropriate, drainage should be provided at edge restraints to prevent the build up of a head of water in the bedding course.