

Q20 GRANULAR SUB-BASES TO ROADS/PAVINGS

To be read with Preliminaries/General conditions.

110 THICKNESSES OF SUB-BASE/SUBGRADE IMPROVEMENT LAYERS

- Thicknesses: See sections:
 - Q22 Coated Macadam/Asphalt Roads/Pavings.
 - Q22 Clause 174 - Soft Play Surface.

130 HERBICIDE

- Herbicide: Apply an approved type in accordance with manufacturers recommendations to subgrade of all external areas.

140 COMPACTION OF SUBGRADE

- Final excavation to formation level: Carry out immediately before compaction of subgrade.
- Soft spots: Give notice.
- Wet conditions: Do not excavate or compact when the subgrade may be damaged or destabilised.
- Thorough compaction:
 - Use a mechanical rammer where use of a roller is not practical.
 - Provide additional compaction where local excavation and backfilling has taken place.

151 SUBGRADE FOR VEHICULAR AREAS

- General: Prepare and compact thoroughly immediately before placing sub-base.
- Method: Not less than four passes of a roller weighing 8-10 tonnes or by equivalent other means.

160 SUBGRADE FOR PEDESTRIAN AREAS

- General: Prepare and compact thoroughly immediately before placing sub-base.
- Method: Roller weighing not less than 2.5 tonnes or equivalent other plant.

210 HIGHWAYS AGENCY TYPE 1 GRANULAR MATERIAL

- Material: Highways Agency 'Specification for highway works', clause 803 (Type 1) or approved equivalent.
- Testing: As clause 803.5, if required by CA.

211 GRANULAR MATERIAL

- Quality: Free from excessive dust, well graded, all pieces less than 75 mm in any direction, minimum 10% fines value of 50 kN when tested in a soaked condition to BS 812-111, and in any one layer only one of the following:
 - Crushed rock (other than argillaceous rock) or quarry waste with not more binding material than is required to help hold the stone together.
 - Crushed concrete, crushed brick or tile, free from plaster, timber and metal.
 - Crushed non-expansive slag.
 - Gravel or hoggin with not more clay content than is required to bind the material together, and with no large lumps of clay.
 - Well-burned non-plastic colliery shale.
 - Natural gravel.
 - Natural sand.
- Filling: Spread and level in 150 mm maximum layers. Thoroughly compact each layer.

220 FROST SUSCEPTIBLE GRANULAR MATERIAL

- Definition: To Highways Agency 'Specification for highway works' clause 705.5.
- Limitations: Do not use within 450 mm of the final surface of the paving.
- Testing: Test materials used if required by CA and supply certificates.

- 230 PLACING GRANULAR MATERIAL GENERALLY
- Preparation: Remove loose soil, rubbish and standing water.
 - Structures, membranes and buried services: Ensure stability and avoid damage.
- 241 LAYING GRANULAR SUB-BASES FOR VEHICULAR AREAS
- Proposals: Well in advance of starting work submit details of:
 - Maximum depth of each compacted layer.
 - Type of plant.
 - Minimum number of passes per layer.
 - General: Spread and level in layers. As soon as possible thereafter compact each layer.
 - At drainage fittings, inspection cover bases and at perimeters: Take particular care to compact fully.
 - After compaction: Immediately before overlaying, the sub-base surface must be uniformly well closed and free from loose material, cracks, ruts or hollows.
- 250 LAYING GRANULAR SUB-BASES FOR PEDESTRIAN AREAS
- General: Spread and level. As soon as possible thereafter, compact with a roller weighing not less than 2.5 tonnes or other equivalent plant.
- 310 ACCURACY Permissible deviation (maximum) from the required levels, falls and cambers:
- | | Roads
Parking areas | Footways
Recreation areas |
|----------|------------------------|------------------------------|
| Subgrade | ± 25 mm | ± 20 mm |
| Sub-base | ± 20 mm | ± 12 mm |
- 320 BLINDING
- Locations: Surfaces to receive sand bedded interlocking brick or block paving to section Q24 and Q25.
 - Material: Sand, fine gravel, PFA or other approved.
 - Finish: Vibrate to provide a close, smooth surface.
- 330 COLD WEATHER WORKING
- Frozen materials: Do not use.
 - Freezing conditions: Do not place fill on frozen surfaces. Remove material affected by frost. Replace and recompact if not damaged after thawing.
- 340 PROTECTION
- Sub-bases: As soon as practicable, cover with subsequent layers, specified elsewhere.
 - Subgrades and sub-bases: Prevent damage from construction traffic, construction operations and inclement weather.