

Swanage Town Council Resurfacing

29 October 2020

Swanage Town Council -
Resurfacing of Car Parks and
Roads

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Q10 Kerbs/ edgings/ channels/ paving accessories

TO BE READ WITH PRELIMINARIES/ GENERAL CONDITIONS.

TYPES OF KERBS/ EDGINGS/ CHANNELS

110 PROPRIETARY PRECAST CONCRETE KERBS

- Standard: To BS EN 1340.
- Manufacturer: Submit proposals.
 - Product reference: Submit proposals.
- Recycled content: Submit proposals.
- Designations: HB2 Kerb, half battered.
- Size (width x height x length): 125 x 255 x 915 mm.
- Special shapes: External angle HBXA.
- Finish: As cast.
- Colour: Natural.
- Bedding: Cement mortar.
- Joints generally: Dry, 2-3 mm gap.
- Sealant movement joints: Not required.
- Accessories: None.

ROAD/ PAVING ACCESSORIES/ MARKING/ DEMARCATION

395 ROAD MARKING (THERMOPLASTIC)

- Standard: Road Safety Markings Association standard specification document for road marking and road studs (StanSpec).
- Manufacturer: Submit proposals.
 - Product reference: Submit proposals.
- Colour: To suit existing.
- Retroreflectivity to BS EN 1436: Not required (Class R0).

LAYING

510 LAYING KERBS, EDGINGS AND CHANNELS

- Cutting: Neat, accurate and without spalling. Form neat junctions.
 - Long units (450 mm and over) minimum length after cutting: 300 mm.
 - Short units minimum length after cutting: The lower of one third of their original length or 50 mm.
- Bedding of units: Positioned true to line and levelled along top and front faces, in a mortar bed on accurately cast foundations or on a race of fresh concrete.
- Securing of units: After bedding has set, secured with a continuous haunching of concrete or on a race of fresh concrete with backing concrete cast monolithically.

530 CONCRETE FOR FOUNDATIONS, RACES AND HAUNCHING

- Standard: To BS 8500-2.
- Designated mix: Not less than GEN0 or Standard mix ST1.
- Workability: Very low.

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540 CEMENT MORTAR BEDDING

- General: To section Z21.
- Mix: (Portland cement:sand): 1:3.
 - Portland cement: Class CEM I 42.5 to BS EN 197-1.
 - Sand: to BS EN 12620, grade 0/4 or 0/2 (MP).
- Bed thickness: 12-40 mm.

547 BEDDING/ BACKING OF UNITS ON FRESH CONCRETE RACES

- Standard: To BS 7533-6.

560 HAUNCHING DOWELS

- Dowels: Steel bar to BS 4482.
 - Size: 12 mm diameter, 150 mm long.
- Installation of dowels: Vertically into foundation while concrete is plastic.
 - Centres: 450 mm.
 - Distance from back face of kerb: 50 mm.
 - Projection: 75 mm.
- Haunching: Rectangular cross section, cast against formwork, fully enclosing and protecting dowels.

570 CHANNELS

- Installation: To an even gradient, without ponding or backfall.
- Lowest points of channels: 6 mm above drainage outlets.

620 ACCURACY

- Deviations (maximum):
 - Level: ± 6 mm.
 - Horizontal and vertical alignment: 3 mm in 3 m.

625 REGULARITY OF PAVED SURFACES

- Maximum undulation of (non-tactile) paving surface: 3 mm.
 - Method of measurement: Under a 1 m straight edge placed anywhere on the surface (where appropriate in relation to the geometry of the surface).
- Difference in level between adjacent units (maximum):
 - Joints flush with the surface: Twice the joint width (with 5 mm max difference in level).
 - Recessed, filled joints: 2 mm.
 - Recess depth (maximum): 5 mm.
 - Unfilled joints: 2 mm.
- Sudden irregularities: Not permitted.

630 NARROW MORTAR JOINTS

- Jointing: Ends of units buttered with bedding mortar as laying proceeds. Joints completely filled, tightly butted and surplus mortar removed immediately.
 - Joint width: 3 mm.

640 TOOLED MORTAR JOINTS

- Jointing: Ends of units buttered with bedding mortar as laying proceeds. Joints completely filled and tooled to a neat flush profile.
 - Joint width: 6 mm.

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641 TOOLED COLOURED MORTAR JOINTS

- Jointing: Ends of units buttered with bedding mortar as laying proceeds. Joints completely filled and raked out to a depth of 10 mm for pointing.
 - Joint width: 6 mm.
- Pointing: Joints refilled and tooled to a neat flush profile.
 - Pointing mortar: 1:3 cement:sand.
 - Pigment colour: Natural.

Q22 Asphalt roads/ pavings

To be read with Preliminaries/ General conditions.

TYPES OF PAVING

110 ASPHALT CONCRETE PAVING TO CAR PARK

- Standard: To BS EN 13108-1.
- Subgrade improvement layer: Not required.
 - Compacted thickness: Not applicable.
- Granular sub-base: Not required.
 - Compacted thickness: Not required.
- Geotextile: Not required.
 - Manufacturer: N/A.
 - Product reference: N/A.
- Base: Not required.
 - Paving grade: Not applicable.
 - Compacted thickness: N/A.
- Binder course: AC 20 dense bin.
 - Paving grade: 40/60.
 - Compacted thickness: See schedule of works.
- Surface course: AC 10 close surf.
 - Paving grade: 100/150.
 - Slip/ Skid resistance: No requirement.
 - Compacted thickness: See schedule of works.
- Reclaimed content:
 - Standard: To BS EN 13108-8.
 - Value (maximum): Submit proposals.
- Surface treatment: Not required.
- Other requirements: None.

LAYING

310 LAYING GENERALLY

- Preparation: Remove all loose material, rubbish and standing water.
- Adjacent work: Form neat junctions. Do not damage.
- Channels, kerbs, inspection covers etc: Keep clean.
- New paving:
 - Keep traffic free until it has cooled to prevailing atmospheric temperature.
 - Do not allow rollers to stand at any time.
 - Prevent damage.
 - Lines and levels: With regular falls to prevent ponding.
 - Overall texture: Smooth, even and free from dragging, tearing or segregation.
 - State on completion: Clean.

330 LEVELS

- Permissible deviation from the required levels, falls and cambers (maximum): In accordance with BS 594987, clause 5.2.

COMPLETION

390 DOCUMENTATION

- Standard: BS EN 13108-1.
 - Declaration of conformity: Submit.
- Number of copies: Two.
Submission: Two weeks after request.

V90 Electrical systems - domestic

GENERAL

- 5 **LOW VOLTAGE SUPPLY**
- Nature of current: Alternating.
 - Phase: Single phase.
 - Voltage: 230 V.
 - Source: Local electricity distribution company.
 - Metering: Existing metering to remain.
 - Accessories: None.
- 20 **DESIGN OF LOW VOLTAGE ELECTRICAL INSTALLATION GENERALLY**
- Design and detailing: Complete for the electrical installation.
 - Standards: In accordance with BS 7671 and the requirements of the Electricity Distributor.
 - Design information: Submit calculations, manufacturer's literature and drawings showing equipment positions and routes.
- 27 **SMALL POWER SYSTEM DESIGN**
- Purpose: As schedule of works.
 - Small power outlets: Provide to serve the building and its equipment.
 - Room: N/A.
 - Outlets: As Schedule.
 - Fixed equipment: Provide supplies.

PRODUCTS

- 30 **PRODUCTS GENERALLY**
- Standard: To BS 7671.
 - CE marking: Required.
- 36 **CABLE TRUNKING AND DUCTING As Schedule**
- Standards: BS EN 61386-24.
- 37 **STEEL CONDUIT AND FITTINGS as Schedule**
- Standards: To BS EN 61386-1 and BS EN 61386-21.
 - Manufacturer: Submit proposals.
 - Product reference: Submit proposals.
- 38 **PVC CONDUIT AND FITTINGS as Schedule**
- Standards: To BS 4607-5 or BS EN 61386-1 and BS EN 61386-21.
 - Manufacturer: Submit proposals.
 - Product reference: Submit proposals.
- 39 **CABLES**
- Approval: British Approvals Service for Cables (BASEC) certified.
 - Cable sizes not stated: Submit proposals and calculations.
- 40 **PROTECTIVE CONDUCTORS**
- Type: Cable conductors with yellow/ green sheath.

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41 ELECTRICAL ACCESSORIES as Schedule

- Standards:
 - Generally: To BS 5733.
 - Switches: To BS EN 60669-1.
- Manufacturer: Submit proposals .
 - Product reference: Submit proposals .
- Finish: Submit proposals .
- Mounting: Submit proposals.

EXECUTION

60 GENERAL EXECUTION

- Standard: In accordance with BS 7671.

63 INSTALLING CONDUIT AND FITTINGS

- Fixing: Fix securely. Fix boxes independently of conduit.
- Drainage outlets: Locate at lowest points in conduit installed externally, and where condensation may occur.
- Location: Position vertically and horizontally in line with equipment served, and parallel with building lines. Locate where accessible.
- Jointing:
 - Number of joints: Minimize.
 - Lengths of conduit: Maximize.
 - Cut ends: Remove burrs, and plug during building works.
 - Movement joints in structure: Manufactured expansion coupling.
 - Threaded steel conduits: Tightly screw to ensure electrical continuity, with no thread showing.
 - Conduit connections to boxes and items of equipment, other than those with threaded entries: Earthing coupling/ male brass bush and protective conductor.
- Changes of direction: Site machine-formed bends, junction boxes and proprietary components. Do not use elbows or tees. Alternatively, use conduit boxes.
 - Connections to boxes, trunking, equipment and accessories: Screwed couplings, adaptors, connectors and glands, with rubber bushes at open ends.

64 INSTALLING TRUNKING AND DUCTING

- Positioning: Accurate with respect to equipment served, and parallel with other services and, where relevant, floor level and other building lines.
- Access: Provide space encompassing cable trunking to permit access for installing and maintaining cables.
- Jointing:
 - Number of joints: Minimize.
 - Lengths of trunking: Maximize.
 - Steel systems: Mechanical couplings. Do not weld. Fit a copper link at each joint to ensure that satisfactory electrical continuity is maintained between the separate sections of trunking, equipment and accessories.
- Movement: Fix securely. Restrain floor mounted systems during screeding.
- Junctions and changes of direction: Proprietary jointing units.
- Cable entries: Fit grommets, bushes or liners.
- Internal fire barriers: Provide to maintain integrity of fire compartment.
- Protection: Fit temporary blanking plates. Prevent ingress of screed and other extraneous materials.
- Service outlet units: Fit when cables are installed.

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66 CABLE ROUTES

- Cables generally: Conceal wherever possible.
 - Concealed cable runs to wall switches and outlets: Align vertically or horizontally with the accessory.
- Exposed cable runs: Submit proposals.
 - Orientation: Straight, vertical and/ or horizontal and parallel to walls.
- Distance from other services running parallel: 150 mm minimum.
 - Heating pipes: Position cables below.

68 INSTALLING ELECTRICAL ACCESSORIES AND EQUIPMENT

- Location: As Schedule.
- Arrangement: Coordinate with other wall or ceiling mounted equipment.
- Positioning: Accurately and square to vertical and horizontal axes.
- Alignment: Align adjacent accessories on the same vertical or horizontal axis.
- Mounting: Submit proposals.
- Mounting heights (finished floor level to underside of equipment or accessory): Submit proposals.
- Accessory face plates: Free from any traces of plaster, grout and paint or similar.

70 INSTALLING FINAL CONNECTIONS

- Size: Determine.
- Cable: Heat resisting white flex.
- Length: Allow for equipment removal and maintenance.

74 EQUIPMENT LABELLING

- Electrical equipment: Install labels indicating purpose.
- Voltage warning notices:
 - Location: Apply to equipment in a position where it can be seen prior to gaining access to live parts when the voltage exceeds 230 V.
 - Format: To BS EN ISO 7010, functional reference number W012, include warnings of the voltage present.
- Distribution boards: Card circuit chart within a reusable clear plastic cover. Fit to the inside of each unit. Include typed information identifying the outgoing circuit references, their device rating, cable type, size, circuit location and details. Label each outgoing way corresponding to the circuit chart.
- Sub-main cables: Label at both ends, with circuit reference using proprietary cable marker sleeves.

76 ENGRAVING

- Metal and plastic accessories: Engrave, indicating their purpose.
- Emergency lighting test key switches: Describe their function.
- Multigang light switches: Describe the luminaire arrangement.

78 FINAL FIX

- Accessory faceplates, luminaires and other equipment: Fit after completion of building painting.

79 CLEANING

- Electrical equipment: Clean immediately before handover.
- Equipment not supplied but installed under the electrical works: Clean immediately before handover.

COMPLETION

- 85 INSPECTION AND TESTING GENERALLY
- Standard: In accordance with BS 7671.
 - Notice before commencing tests (minimum): 24 hours.
 - Labels and signs: Fix securely before system is tested.
 - Certificates: Submit.
 - Number of copies: Two.
- 89 MAINTENANCE
- Servicing and maintenance: Undertake.
 - Duration: Until 12 months after Practical Completion.