

**GENERAL NOTES**

1. These notes are to be read in conjunction with Drg Nos **SD/700/2 - 13**.
2. All dimensions are in metres unless otherwise stated.
3. Unless shown otherwise in the contract topsoil depths shall be 150mm measured vertically on slopes less than 10% and 150mm measured at right angles to the slope on slopes greater than 10%.
4. The road construction thickness and width of drain shown are diagrammatic only.
5. Billed as fill on sub-base material, base and capping.
6. Billed as Type B filter material contiguous with filter drains.
7. Where the depth of ditch is less than 800mm the distance 'x' should be a minimum of 1m. For ditches in excess of 800mm deep, the distance 'x' should be increased to 2m. For details of the ditch profile see Drg No **SD/500/27**.
8. Where there are no cut off drains at the top of the cutting slope the distance from the top of slope to hedge will be 1m. If a cut off drain is required the distance should be 2m for drains up to 150mm diameter and 3.5m for drains in excess of 150mm diameter.
9. On carriageways where the combined depth of surface course, binder course and base is less than 280mm, then the depth of the sub-base should be reduced under the line of the kerb base to allow for 150mm minimum thickness of concrete under the kerb.

On carriageways where the combined depth of surface course, binder course and base is between 280mm and 355mm, then the underside of the concrete kerb base should coincide with the underside of the road base. Dowel bars may be omitted providing that the concrete under the kerb is placed in one lift and not allowed to set before the backing concrete is placed. The contractor must allow for the additional concrete above the 150mm minimum depth in the rate for kerbing.


On carriageways where the combined depth of the surface course, binder course and base exceeds 355mm, then an insitu concrete beam should be constructed in ST3 concrete using forms and allowed to set before placing the kerb base. The width of the beam should be sufficient to allow a kerb base of 150mm minimum to be placed. The minimum depth of the beam should be 75mm. 16mm diameter dowel bars should be placed in the beam at 450mm centres and of sufficient length to extend into the backing concrete by 100mm. The contractor must allow for the additional concrete, dowel bars and operation costs in the rate for kerbing.

Where a carriageway is in partial construction with no sub-base (eg over existing carriageway) then payment for kerbing is based on 150mm depth of concrete. Extra concrete will be paid as an additional EO item. This EO item will not apply in full construction works.

**NOTES FOR GUIDANCE FOR DESIGN ENGINEERS**

- NG1. The side slope angles for embankments and cutting slopes of 1 in 2 are regarded as a typical maximum. Side slopes should be designed based on engineering properties of the soil and with appropriate factors of safety.
- NG2. The depth of ditches shall be sufficient to intercept all existing field drainage systems. It is advised that laying records be obtained from adjacent landowners prior to detail design. A 900mm deep ditch should be regarded as a minimum depth where field drainage systems are present.
- NG3. Side slope stability of ditches should be considered for ditches in excess of 1.2m deep, and the following alternatives considered:-
  - (1) Alternative side slopes;
  - (2) Random rubble lining;
  - (3) Filter drain in lieu of ditch. (see Drg No **SD/700/9**)
- NG4. Filter drains should be used in lieu of intercepting ditches where the embankment height exceeds 3m.
- NG5. Where a cycleway or combined footway-cycleway (CFC) is to be provided, the verge shall be widened to accommodate the width of route stated in the agreement (or not less than 2.5m) plus a safety margin strip as shown on Drg No **SD/1100/14**. Where the cycleway/CFC is on embankment the verge profile should extend 0.5m beyond the back edging at a grade of 1 in 20. On embankments of heights greater than 2m a protective three rail fence shall be specified as shown on Drg No **SD/300/19**.



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