

**STONE CHIPPINGS**

**(SURFACE OPTION No. S 02)**



**INTRODUCTION**

Stone Chipping surfacing is one of a number of road surface improvement or paving options that use **natural stone** and are suitable for construction using **labour** and **simple equipment**. Other options are Water Bound Macadam, Dry Bound Macadam, Hand Packed Stone, Telford Paving, Cobble Stones, Stone Setts or Pavé, and Dressed Stone. None of these options normally require the use of expensive bitumen or cement binders, or high-cost equipment. Therefore a high proportion of the costs may be spent in, and benefit, the local community. Stone Chipping surfacing is suitable for use as a surfacing on low traffic volume, low speed roads, where there is a need to avoid dust problems, for example where insitu soils and available gravel produce excessive dust close to habitation or crops. However, it is not usually advisable to use where bicycle or motorcycle traffic is common.

**DESCRIPTION**

Stone Chippings are normally hand or machine crushed from hard rock. The chippings are normally 10 – 20 mm in size. They are laid on the previously prepared and shaped insitu soil foundation. Chippings are laid to a depth of 50 – 200 mm, depending on the strength of the foundation. The chippings can be spread with a rake and only light or traffic compaction is required, with re-shaping to correct in service surface irregularities.

ADVANTAGES	DISADVANTAGES
<ul style="list-style-type: none"> <li><input type="checkbox"/> Simple, low cost, all-weather surface suitable for low traffic flows and low speeds.</li> <li><input type="checkbox"/> Does not require expensive equipment or skills.</li> <li><input type="checkbox"/> Labour breaking and laying of chippings can be used in remote areas with access problems for crushing equipment or heavy plant.</li> <li><input type="checkbox"/> Low dust surface, suitable near domestic buildings and crops.</li> <li><input type="checkbox"/> Stone loss from the surface is usually low.</li> <li><input type="checkbox"/> Easy to maintain by reshaping and adding more chippings.</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Requires good quality stone.</li> <li><input type="checkbox"/> Only appropriate for light traffic.</li> <li><input type="checkbox"/> Not suitable for bicycles and motorcycles or high speed traffic, due to loose surface and risk of accidents.</li> <li><input type="checkbox"/> Risk of flying stone chippings from faster traffic.</li> <li><input type="checkbox"/> Not suitable on steep gradients.</li> <li><input type="checkbox"/> Not suitable directly over moisture susceptible sub-grades such as expansive clays.</li> <li><input type="checkbox"/> Medium levels of maintenance.</li> </ul>