

## TARGETED INTERVENTIONS FOR LOW-VOLUME ROADS

### ABSTRACT

This document is an *interim* Guideline which provides information on the provision of low-volume roads with special emphasis on the use of locally available materials and application of appropriate surfacings. The Guideline was prepared for the road sector in Mozambique in support of the Rural Road Investment Programme (RRIP) undertaken by the National Road Administration (Administracao Nacional de Estradas – ANE).

The Guideline covers fundamental aspects of road provision in rural areas with special focus on sustainability. Road provision is an expensive undertaking and unless the works are executed properly, huge investments in road provision can be wasted.

The document provides details on the following aspects:

1. Project planning – this is one of the most important aspects of road provision. Most of the problems encountered in the provision of rural roads are a result of poor planning. Planning is often considered as time wasting because progress in the planning process does not translate to kilometres of completed road or tangible quantities of production.
2. Design procedures and specifications – Many performance problems that are encountered with rural roads can be resolved at the design stage. Performance problems are usually a result of using non-conventional materials in the construction of these roads. For non-conventional materials, the development of appropriate designs should be carried out on a project by project basis with the aim of countering the adverse effects of the road environment and performance deficiencies of these materials.
3. Work norms – work norms refer to works procedures and approval specifications for the works. This is the quality assurance component of road provision and contributes substantially to value for money for the client and sustainable service for the road user. Quality assurance is the responsibility of all parties involved in road provision.

The content of this Guideline is based on the knowledge developed in previous and recent research and experience in Mozambique including phase 1 of the RRIP pilot project. The Guideline also incorporates experience from elsewhere that is relevant to the provision of sustainable low-volume roads. It is an interim document prepared to fill an urgent need. A more detailed version will be produced in future based on the research being undertaken. Meanwhile, this Guideline will be useful to practitioners in the execution of similar works in Mozambique before a final manual is published at the end of the research programme.

Practitioners should be aware that the approach to the provision of low-volume roads is different to the traditional or conventional approaches. Conventional approaches are well researched and resourced in terms of the documentation, software and other tools, and general experience and capacity. This is unlike the provision of low-volume roads where knowledge and experience is limited.

The Guideline also takes cognisance of the challenges being faced in road provision in developing countries, particularly in rural areas where projects are remote and facilities are very limited.