JPM Parry & Associates

Actions speak louder . . .

Fact Sheet no.3: Mud and dust in hospitals, schools and offices

Description and analysis

Many tropical developing countries have significantly populated areas where the ground is either muddy during the wet seasons or dusty during the dry season. Depending on the season, either mud or dust can encroach into hospitals where there is a constant battle to maintain hygiene, schools and offices. This is a symptom of a lack of hard paving in areas of heavy clay soils. Apart from the potential health risk, there is inconvenience and an economic cost associated with dirt affecting furnishings and electronic equipment..

Design response

If money were no object, urban and residential roads and driveways would be surfaced using established techniques, laying asphalt or monolithic concrete slabs on consolidated and stabilised bases. However outside capital city centres neither the equipment nor the skills are available for conventional highway construction. An equivalent result has to be achieved by deploying locally available labour and material resources.

Parry Associates technical input possibilities

The full range of Parry equipment includes presses and vibrating tables which are manually operated and therefore suitable to be used in small workshops. The output from production plants which use such equipment can include paving slabs for terraces and pathways, and plain and interlocking paving bricks able to withstand axle-loading of road vehicles. As with the other building material technologies a full compliment of training and technical support services is available alongside well proven machines and ancillary tools.

Local resources required

Labour intensive construction of roads, driveways and building surrounds is possible if the surfaces are made up of pre-cast elements (concrete). In some favourable circumstances paving bricks produced from burnt clay may be used. All of these elements can be manufactured in labour intensive conditions.

Potential local business response

Local production of clay brick is fairly common, and 'sandcrete' blocks are very common. The entrepreneurs concerned are potential users of materials and equipment, leading to commercial production ventures based on upgraded quality traditional manufacturing. Building contractors are also potential business counterparts, consuming their own outputs. Non-governmental organisations (NGO) and local co-operatives are also frequently capable of installing and

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operating building materials workshops, producing the elements which make it possible to turn areas of mud and dust into clean, smooth, hard surfaces.

Real case studies

The Gambia is one of many countries where both mud and dust can be a nuisance depending on the season, and as part of the Resource Based Building Materials Project (began in 2000) the issue of mud and dust encroachment into buildings was addressed using Parry ideas. For a list of other case studies where Parry technology has been used to combat problems in the developing world see the Success Stories page on the website.

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